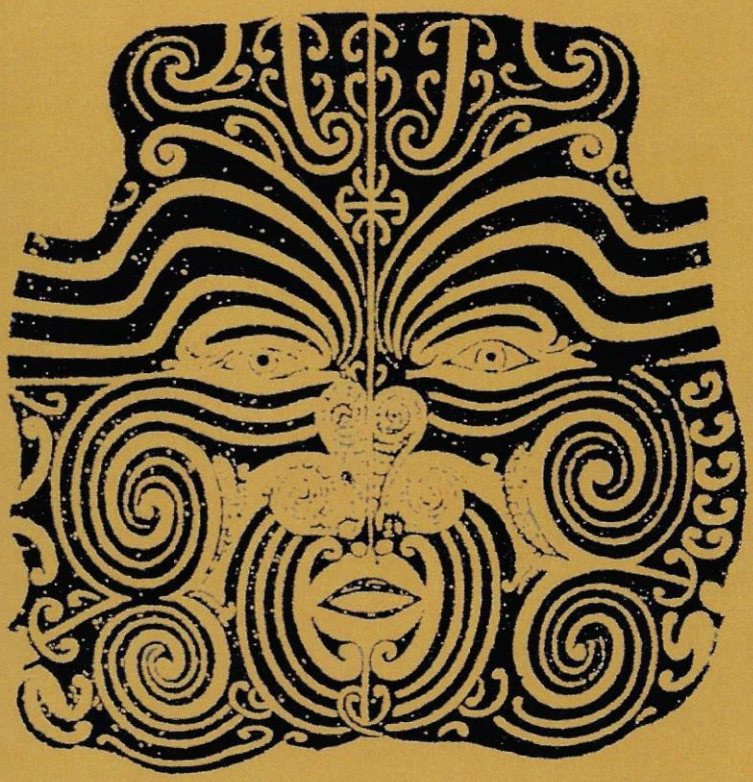
MAORI

THE AFRICAN EVIDENCE



By

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2009

MAORI

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Fourth Edition with Notes and Index

2009

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PREFACE

The Author's background in Malayo-Polynesian languages goes back to the time he spent at Christchurch Teachers' College after the completion of his MA in 1961. Dr. John Moffat, Principal Lecturer in Languages, encouraged him to write a short thesis on the Malay Language. After spending two years at Emmanuel College, Cambridge, he returned to NZ and was introduced to the study of Maori by Koro Dewes who was then lecturing at Victoria University of Wellington.

These two outstanding teachers laid the foundation on which this book has been written. It was only after a decade devoted to the Niger-Congo Languages of Africa that the Author realised that Maori came from this source.

Christchurch,
August, 2007.

The third edition has been expanded to include further linguistic remarks in the Postscript together with some anthropological comments relevant to the possible path followed by the Māori voyagers on their way to New Zealand. A few other additions and corrections to the text have been made.

November, 2008.

The fourth edition makes further corrections and additions to the text, and adds a section of Alphabetic Notes on a range of matters, together with an Additional Bibliography and Māori Lexical Index. .Noteworthy is the new explanation of Māori *atua* "ghost", "god" from Bantu *(v)atua* "little men", "dwarves", "Bushmen". The word must be related to "Ba(n)tu" = "Men", Hittite *antuhsa, antuhha* "man", Malay *hantu* "ghost" etc. Bantu uses *twa* for "pygmies, dwarves etc". Other new etymologies have also been proposed. The African Poro societies appear in Māori names Ngāti Porou, Porokura. The word *poro* has various meaning in Māori, including "witchcraft".

November, 2009.

PLACENAMES

Maori is known to be a Malayo-Polynesian language, but has deeper connections with the Austro-Thai group (Benedict 1975). The name Thai (Maori *tai* "sea, coast, tide") is common in China, Thailand and Hong Kong. Places called Taiping are found in both China and Malaysia. There is however a place called Taï on the Ivory Coast of Africa, and a Niger-Congo language called Taita. India has a mausoleum called the Taj Mahal. The Niger-Congo root **ta* means "dwell". Maori *taiao* signifies "world, country". The Egyptian hieroglyph (N16) *t3* means "land" (flat alluvial land with grains of sand beneath it is depicted). Maori *rā* "sun, day" matches Egyptian *ra* "sun, day", also Niger-Congo *ra, la, d.a* "sun, day". Genetics indicates an early migration out of Africa into Asia, and from Asia into the Pacific (Cavalli-Sforza 2000). We can trace the Maoris back to Asia. They came from Taiwan (root *tai*), as mitochondrial DNA shows. The Y chromosome points to Melanesia however.

African names : Bali (Cameroon), Bali (Indonesia); Sarawak (Indonesia), Sara (Nilo-Saharan) + Waka (Benue-Congo), Nandi (Nilo-Saharan tribe), and Nande (Niger-Congo), Nandi (Fiji), Bau-le (Niger-Congo), Bau (Fiji) Togo (Niger-Congo), Togo (Niue), Samo (Mande language), Samoa (Pacific Island), Tonga (Benue-Congo language), Tonga (Pacific Island), Tahiti (Polynesian Island) with *tai* from *taCi* (PPN *tahi, Tongan *tahi,* Fijian *taci* & *tai* "seacoast"). Madagascar near Africa has language names Taisaka, Taifasy etc (Malagasy).

Related placenames also occur in the Americas and West Indies. We have the tribal names Arawak, in Guyana (= Indonesian Sarawak), with Arawakan language further south near Peru, and Taino in Antilles (compare the Maori canoes Arawa, Tainui). Taino culture was aceramic and illiterate, as was Maori. The Taino used a small mute dog for hunting, like the Maoris. The Arawakan languages are the remnant of a group once extending from Florida to the Argentina border (Suárez in NEB 1989 : 22, 793). The (American) *kumara* or sweet potato was known to the Maoris. So expeditions from the Pacific to the Americas must have taken place. We can trace early language history by examining the placenames.

CONTENTS

PLACENAMES	**Page 3**
THE EVIDENCE	**Page 5**
GRAMMAR	**Page 10**
THE NOUN	**Page 22**
ADJECTIVES	**Page 38**
NUMERALS	**Page 40**
PERSONAL PRONOUNS	**Page 45**
THE VERB	**Page 47**
PREPOSITIONAL PHRASES	**Page 55**
SENTENCE & CLAUSE MARKERS	**Page 58**
WORD ORDER	**Page 61**
PHONOLOGY	**Page 62**
VOCABULARY	**Page 78**
IMPLICATIONS	**Page 142**
MADAGASCAR	**Page 143**
ABBREVIATIONS	**Page 144**
BIBLIOGRAPHY	**Page 145**

POSTSCRIPT	**Page 151**
ALPHABETIC NOTES	**Page 160**
INDEX	**Page 166**
ADDITIONAL BIBLIOGRAPHY	**Page 196**

THE EVIDENCE

"Today's morphology is yesterday's syntax".

T. GIVÓN

One might add that old morphology survives like bones buried in the lexicon, from which it can be recovered by analysing the form and meaning of words.

The most reliable evidence for genetic language relationships is morphology. Both Maori -like other languages of its group such as Tagalog (Rubino 2002 : 9 etc)- and Niger-Congo are agglutinative in their morphology and employ prefixes, suffixes, infixes. Infixation (affix insertion) in both Maori and in Niger-Congo is not well understood. It was productive in Afro-Asiatic. Williams speaks of Maori "letter insertion". Thus *-te-*, *-a-* etc are interpolated (eg in archaic songs) for reasons that are often obscure (Best 1925/2005 : 202). Niger-Congo *tè* (from *ta* "hand, cut") means "cut, past tense, straight away". This perhaps explains its use in old Maori songs. Bauer's (2003 : 25, & General Index) detailed synchronic description of Maori appears not to recognise infixation, as it is no longer productive.

Malay has a range of noun-classifiers. Niger-Congo uses prefix-classifiers on the noun. Some of these occur in Maori. Both Maori (and Tagalog, Malay) show reduplication, both partial and total, as a morphological device. So too Niger-Congo. The resemblance goes beyond mere typology. Some morphological similarities are highly specific, using the same forms and signalling the same meanings in both Maori and Niger-Congo.

To this we add basic vocabulary. "Basic vocabulary and basic grammar have always been found to develop together in the well-known comparative fields", says Uriel Weinreich (1958) sagely. Much basic vocabulary shows regular sound correspondences between Niger-Congo and Maori. However a special complication here is caused by the existence of phonological doublets in Maori due to "consonant mutation": *k = k/h, b = p/wh* etc. The

fricative of the fricative grade may be lost, giving a zero consonant, effectively yet another grade. Variations of meaning may then develop between originally equivalent words.

Doublets

"Not infrequently two forms of the same word will be used in the same district, or even by the same person" (Williams 1844/1971 : xxxvii). Thus *ai, ahi* "beget", (also *aki* "boy" [Tahu.]), *anamata, namata* "hereafter", *aku* "delay, take time over", *ahu* "to foster", *pā* "sir", *whae* "madam", *uwha* "woman", *pā* "indefinite number, multitude" "be collected together", *whā* "four" (large number), *pā* "hold personal communication", *whaka-pā* "tell privately", *whā* "be disclosed", *whai* "perform an incantation", "a spell" etc. PWS *ba* > Maori *pā, wha* has similar diverse meanings. This peculiarity extends to the beginnings of words : *u-/mu-, i-/mi-* (prefixes ?).

Compare the phenomenon of "consonant mutation" (Sapir 1971 : 45 - 112) in Niger-Congo, which recognises fricative grades of plosive consonants. In Maori "vowel mutation" also occurs : *na, no, a, o* "of" etc. The *o*-forms are "passive/intransitive" in application. Maori also uses syntactic doublets. Eg the continuous *e...ana* (all tenses) alongside *kei te* (present or future) and *i te* (past). Biggs (1969) calls the constructions with *te* "pseudo-verbal" (nominal).

Maori is unusual in that it carries its history in its luggage compartment, so to speak. Older forms and newer forms exist alongside each other to a remarkable degree. By inspecting variant forms, doublets and the like, we can gain an insight into the Maori language's past.

In most cases my first recourse has been to Williams & Williams (1862/1965) who provide a concise account of traditional Maori grammar in relatively non-technical language. Biggs (1969 : 51) points out that the traditional view multiplies the parts of speech and that "a given word may, at different times, be any one of several parts of speech". He recognises only two word classes, BASES (full words) and PARTICLES (grammatical words or functors, pre- or

postposed to bases) forming the PERIPHERY. I follow Williams & Williams for the sake of convenience. Interestingly however my historical interpretation of Maori in terms of Niger-Congo (or Nilo-Saharan) leads to a conclusion similar to that of Biggs.

The primitive basis of both Niger-Congo and Maori grammar appears to have been a schema of the form: CLASSIFIER + CLASSIFIED, ie. a general label followed by a more specific thing labelled. The particles or classifiers are mostly monosyllabic and lack morphology.

This structure applies not only to nominals and verbals but also to prepositional constructions (which are really preposition = verb, + noun or equivalent). Ultimately the Maori sentence, with its PARTICLE + BASE patterns is comparable to the Bantu repeated (Preprefix) + Prefix (+ NOUN), (+ VERB), (+ ADJECTIVE) etc pattern. The syntax proceeds by addition, (agglutination) of items. The Niger-Congo "serial verbs" are additive also. The same might be said of the old verbless appositional sentences (common in Maori, but not in English). The syntax of Maori is built on the phrase.

MAORI I VERBAL & II VERBLESS SENTENCES

I. *Ka here, a Paka, i ngā kurī.* "Paka ties up the dogs". (PB PB PPB)

II. *He rangatira, tērā tangata.* "That man is a chief". (PB PB)

(Examples from Biggs 1969, but with long vowels marked by the macron).

This procedure of addition may give rise to alliteration (initial consonant repetition) :

***T**e otinga o tāua te tangata**, k**o Hawaiki-nui, ko Hawaiki-roa, ko Hawaiki-pāmamao. Haere rā i a **k**oe ka kōpikopiko atu ki Te-Hono-i-wairua, ki te kāpunipunitanga o te wairua.*

"The inevitable destiny of mortal man, Hawaiki-nui, Hawaiki-roa, Hawaiki-pāmamao farewell you as you wend your way to Hono-i-wairua, the meeting place of departed souls".

(Maori Funeral Oration by Kepa Ehau, c. 1937, from MPNZ, 42)

Bantu Alliterative Concord no doubt had such an origin. Bantu maps the prefix of the Subject Noun in initial position onto the verb, the object, and successive parts of the sentence. Eg

B*o aba-ntu babi babota tu-ba-tia.* "They : these-they person : they bad : they who kill : we them fear", ie "They are bad people who kill ; we fear them."
(Luganda, from Johnston 1911).

One might argue about the status of these prefixes, and whether such sentences are "verbal". Niger-Congo, like Maori, uses nouns (often body parts) and verbs for making prepositions. Locative pronouns are used as prepositions (prefixes) in Congolese (Stapleton 1903 : 121, also 126). See Williams & Williams (1862/1965 : 18) on complex Maori prepositions incorporating a noun (+ repeated preposition). Westermann (1930) on adverbs is relevant here. Prepositional phrases are fundamentally HEAD + MODIFIER type patterns (mainly = verb + object). Historically small words of one syllable, often reduced to a single vowel, present problems of etymology and meaning. Uncertainties regarding word class in both Maori and Niger-Congo make these problems more acute.

Pawley (1989) states that in Proto-Austronesian, the Malayo-Polynesian protolanguage from which Maori derives, "Most roots are capable of being used either as nouns or verbs" (page 756). The same could be said of Niger-Congo. Niger-Congo also shares with these languages the tendency to give adjectives, numerals and negatives the role of verbs (Pawley page 760). Compare Pratt (1893: viii) on Samoan: "Verbs and adjectives, in their simple form, with *'o le* put before them, are used as nouns". He quotes Codrington, p. 237: "Numerals in the Melanesian languages are used as nouns, adjectives, and verbs". So Malay (Winstedt §23).

A modern descriptive treatment of Maori grammar has been recently provided by Winifred Bauer (1997/2003). Ray Harlow's (2001) grammar is more summary, and largely follows Biggs, but is nevertheless most valuable. Williams' Dictionary (1844/1971), revised,

remains indispensible. I have also used Lynch's (1998) Pacific Languages, Elbert's (1964) comparative study of Hawaiian, Capell's (1941/1968) A New Fijian Dictionary and Pratt's (1893) Grammar and Dictionary of the Samoan Language, also (1911/1960). Milner's Samoan Dictionary is more recent. Pawley's (1989) NEB article has already been mentioned.

For Malay Winstedt's (1927) Malay Grammar remains thoughtful and erudite, particularly for discussion of the parts of speech, reduplication and the affixes. In the Postscript, and elsewhere, reference has also been made to Leenhardt's (1946) Langues et dialectes de l' Austro-Mélanésie. The material from Vekens (1928) introduces some Nilo-Saharan comparisons with Makere, Medje and Mangbetu. Niger-Congo is not fully distinct from Nilo-Saharan. Postposed *i* (a problem in Maori) appears in Mangbetu (Vekens 1928 : 137). The Mangbetu preposed article *na* etc may be the cause of nasal grades of consonants.

For Niger-Congo Westermann (1927 etc) provides a wealth of comparative grammatical and lexical information. My debt to him is immense. But I have also consulted the modern authorities on Niger-Congo languages. In general I follow the Westermann-Mukarovsky tradition of Niger-Congo scholarship, which has proved fruitful for the kind of work I am doing.

GRAMMAR

REDUPLICATION

This is partial (initial CV) or total repetition of the word from the front, as in Niger-Congo (and other African) languages. This even extends to the specific Niger-Congo procedure of reduplicating with *C + i,* as in Maori *titaha* "lean to one side", *titaka* "wobble" (phonological doublet). Westermann's reconstructed PWS forms recognise 14 out of about 400 words as reduplicated. These are often optional (*bá, bábá* "father"), expressive (*bobo* "mute"), or described as "Wanderwörter". His actual language examples however include far more reduplications occuring only in particular languages. As his roots are mainly monosyllabic, most reduplications are disyllables. Ewe *gbàgbàgbà,* Tschi *gwàgwàgwà,* Ga *gbogbōgbo* "very much" is an exception. The Niger-Congo prefixes are often reduplicated : the pattern Preprefix + Prefix, *gaga-*, *mumu-*, *didi-*, etc is a special case of N-C reduplication.

Such reduplication of Niger-Congo prefixes is evidence that the prefixes were once full words. True prefixes lack morphological complexity.

There is some evidence for the use of reduplication in forming noun plurals in Maori. Eg *taitai* "tides" (from *tai*) with plural adjectives *nunui* "spring", "big" and *ririki* "neap", "small". Compare *kanakanaia* "witchcraft" (from *kana* "bewitch, witchcraft"). Also *pakapaka* "scraps, provisions" (from *paka* "scraps, provisions"), *whiuwhiu* "overlapping layers of *toetoe* "grass, thatch, shingles", *wī* "tussock", *wīwī* "rushes". Malay uses the reduplicated plural noun systematically to make plurals and indefinites, but can always employ the singular with plural meaning (like Maori). A "2" may be written after the Malay noun to show reduplication : *akar-akar* "roots", or *akar*^{2}. In general Maori uses reduplication (partial, total, multiple repetition), more freely than any other language that I have ever encountered. It occurs across all word classes, and has many, but sometimes no obvious, functions. It may just be an alternative to the *simplex*.

The word *hoa* “companion, spouse” has a reduplication *hoahoa* meaning “spouse” but also “two wives” (of one man). Maori *pāpara* = “true father” vs. *pāpā* (used of uncles etc). Now *ringa* means “arm”, “weapon”, whereas *ringaringa* “arms”, “arm and weapon”. The word *mata,* or *matamata* “eye”, “face”, “point”, but *matamata rongo* (of pressing noses). Maori *kumi* “ten fathoms” (Hawaian *ʻumi* “ten”), but *kumikumi* “beard”, Maori *toro* “reconnoitre”, but *torotoro* “scout” (n), *tipi* “push”, *tipitipi* “push-hoe” (nouns from verbs). Often Maori has the same form for both noun and verb (and adjective).

Niger-Congo has a few surviving plural examples in names such as Kwakwa (the Avikam), Gangan (a tribe), and the Yoruba word *e-gberu* “thousand”, *e-gbegberu* “thousands” (Westermann 1927 : 76, 125, 17). However Tschi *gwàgwàgwà* is “very much”, PWS *guà* “much”, but *guá* “thirty” (cowries). Compare Khoisan (Nama Khoe) *khoikhoi* “people”, as against *khoi* “person” (Fijian *kai* “male inhabitant, native”, *kaikai* [plural]). Poto and Ngombe have *limbimba* “anchor” (“hand”?), Bangi, Ngala, Poto, Kele *bongongo* “brain” (compare Maori *upoko* “head”), which are clearly not plurals.

Adjectives in Maori may double the disyllabic root, or sometimes only the first syllable, to weaken the meaning : *wera* “hot”, *werawera* “somewhat hot”, *pango* “black”, *papango* “dark, somewhat black”. The numeral *toru* “three” gives *torutoru* “few”. Contrast early Khoisan counting : “one, two, many”. Reduplication of the adjective reinforces the meaning in Congolese (Stapleton 1903: 60) : Bangi *moto mone* “a large man”, *moto monene* “a very large man”. Igbo has *a-babala* “wide and flat” from *bà* “wide”. But in Tagalog initial CV reduplication may restrict the number: *dalawá* “two”, but *dadalawá* “only two”, likewise *apat* “four”, but *aapat* “only four”, *limá* “five”, *lilimá* “only five”.

A few Maori adjectives double the first syllable to make a plural : *nui* “large”, *nunui* (plural), *roa* “tall”, *roroa* (plural). The singular is still used of plurals in these words however. These plural forms are also used as intensives “very large” etc (Harlow 2001 : 114 - 117). Harlow

has a useful summary of reduplication in Maori. He observes that only adjectives and a few verbs show both partial and full reduplication. Neuter verbs have full reduplication only.

The Maori word *tata* "near", also *taitata, tātata* "near", *pātata* "near", looks very old. The "prefixes" *pā-, tā-* both mean "go" (*ba, ta*) in Niger-Congo. PWS *ta* (Westermann 1927 : 284, *tà*) is reduplicated to *tata* meaning "sole of foot", "palm of hand", which occurs with various prefixes (and suffixes). It is a good candidate for explaining Maori *tata* "near". The same Maori word means "suddenly", compare PWS *tètè* "immediately" (from *tata, *a* > *e*). Surely this is not a coincidence, any more than the Maori use of *kūkū* "pigeon", PWS *kùkù* "pigeon". There is also a form *kūkupa* in Maori "pigeon", which is strangely reminiscent of Igbo *bwana-kuku* "pigeon". See also Maori *popohe* "stupid", "blind" etc, which matches PWS *bobo* "to be dumb", "to be stupid". Old reduplicating morphology, with identical meanings, can be seen in these Maori and Niger-Congo words.

This process of reduplication is common in Maori verbs with frequentative meaning : *kakai* "eat frequently" (from *kai*), *mama* "perform rites" (from *mahi* "perform"), *kaka* "flutter", *kakakaka* "stammer", *tītaka* "unsteady", *tītakataka* "turn over and over". These expressions resemble the Niger-Congo ideophones, words with onomatopoeia, reduplicated morphology, lengthened vowels (or consonants) and affective meaning (Watters in Heine & Nurse eds. 2000 : 196). Gardiner (1957 : 237) associates "geminating forms" of the Old Perfective Verb in Egyptian with "repetition or continuity". Compare page 210 "Reduplication". He distinguishes stem "gemination" (mutable) from "reduplication" (secondary, immutable).

Harlow (page 115) quotes verbs partially reduplicated to show reciprocity (shown by a suffix *–na* in Bantu), or intensity. He associates full reduplication in verbs with actions performed several times, but also with multiple agents (group action), and repeated objects. More complex types of reduplication are dealt with by Harlow on pages 116 & 117. See Lynch (1998 : 84 – 87). For reduplicated diminutives in Samoan see Pratt (1893 : 4).

For reduplication in Kwa see Westermann (1927 : 63, 98, 20, Grebo infinitives; 68, 105, Yoruba & Ewe verbal nouns & adjectives), Westermann (1926 : 4, Ibo verbal nouns, also some rare simple nouns "leaf", "crab"). Also Westermann (1930 : 77) on Ewe : *yi* "go", *yiyi* "the act of going", *d.u* "eat", *d.ud.u* "edible, eaten". In Adamawa-Ubangi "verb reduplication is practically universal" (Boyd in Bendor-Samuel 1989 : 208).

Reduplication in Maori may involve vowel lengthening: *haere* "go", *hāereere* "go about" (with postinitial reduplication), *tiki* "fetch", *tīkina* "be fetched" (Harlow 2001 : 8). These examples might be seen as intensive. Armstrong in Bendor-Samuel (1989 : 332) mentions that in certain Idomoid languages "the gerund begins with an *ò-* prefix, as in Igede and the Idoma dialects. In Igede and Yala the prefix is harmonic. In Igede the prefix is on a low-mid tone ... and the verb stem is fully reduplicated on its basic tone". This *o*-prefix must be from *(j)a-*.

A search for comparable examples in Maori revealed nothing better than *āhukahuka* "resemble, recognise, approach" and *āhumehume* meaning "pleasing" or "a woman's garment reaching from waist to knee". Whereas Maori *ani* means "resounding", *ānina, āninanina* means "giddy, aching" and *ānini, anini* means "giddy, aching" (of the head), but also "sensation", and *āninininini* means "reeling". In theory the Maori initial *ā-* might correspond to an Idomoid (vowel) harmonic prefix. But the matter is far from certain.

The original force of reduplication seems to have been repetition or indefiniteness (compare the N-C preprefix + prefix), as in Malay and Egyptian. It then developed grammatical applications (to mark word class etc). In Malay all parts of speech except prepositions may be reduplicated, and the consonant of the base word may be changed to reinforce the idea of variety : *sayur-mayur* "all kinds of vegetables". The Maori particles, likewise, cannot be reduplicated. These particles are short, lack grammatical complexity, and may be vague in meaning or difficult to classify.

Written Signs

It is not without interest that in Ancient Egyptian hieroglyphic writing the plural and dual numbers of nouns were indicated "by repetitions of signs or by the use of special determinatives" (Gardiner 1957 : 60). This usage might have been based on reduplication. The Maya language, like Egyptian, used the rebus principle in its pictographs.

Indeed Maori may once have had a system of signs, comparable to, but much more limited than Hieroglyphics. See Best (1929/2005 : 93, 94) for tables of Maori lunar fishing signs (crescent moon etc). Maori canoes sometimes had figures painted onto their sides. The Maori *moko* (tattoo) could be used as a written signature. Mande has *mòkò* "man" (Delafosse 1929), Mangbetu (Vekens 1928) *moko* "sheath". Maori narrative string figures and linguistic hand signs (for words or syllables) are also relevant to this question (Best 1925/2005 :119). String figures expressed mythological narratives, as in Africa. Both American Indian languages and Egyptian hieroglyphics used signs based on string figures. In early languages signs of various kinds underlie written expression. In Malay handsigns are used in conjunction with speech. Tagalog once used an Indic syllabary with three vowels (Rubino 2002 : 8).

The Maori language is related to Rongorongo (Easter Island), which has an undeciphered pictographic system of writing. Stephen Fischer's interpretation of this cannot be taken seriously (see the reviews), any more than his attempt to decipher the Phaistos Disk as a "Battle of Naxos".

VOWEL LENGTHENING

This is used in a few Maori words to indicate the plural of nouns : *wahine* "woman", *wāhine* "women", *tangata* "man", *tāngata* "men", *matua* "parent", *mātua* "parents" etc. The lexical range of this device is limited, loosely "family". English plurals in *–en, men, women, children, oxen* are similarly archaic and irregular (N-C *–ni* ?). Biggs refers to this procedure as "infixation" and treats long vowels as doubled. The "long" plural element may have been

due to addition of an ancient postposed article *–la, ra* > *-a* [*a* + *a* > *ā*], which was sometimes used to mark plurals in Niger-Congo, or to doubling of the prefix (indicating plural ?) : *wa(w)a-* > *wā-* etc. See Harlow (2001 : 116) on initial vowel repetition in reduplication. If we take Maori *wahine* "woman", *wāhine* "women" as an example, we can compare Bangi *mwene* "woman", Ngombe *mwali* "woman" etc. Both these words have the prefix *wa-* (from *ba-*) which is found on "woman" in Maori. Reduplication, with *w*-loss, is the best explanation of the Maori plural here. Compare Malay reduplicated plurals. Moriori has *mahine* "woman".

Long vowels are not usually reconstructed for Proto-Niger-Congo. Westermann (1927) recognises rare or aberrant long vowels in a few isolated reflexes of about 20% of his reconstructed stems. Eg Guang *bā* "someone", elsewhere *ba* "one". Interestingly PWS *tà, tàtà,* has an occasional monosyllabic form with a long vowel (eg in Tschi) *tā* "to become level", which suggests *tata* > *taa* > *tā.*

In Maori verbs reduplication (first syllable doubling) is dropped in the passive : *pupuri* "to hold", but *puri-tia* (suffixed passive) "to be held". This change may sometimes involve vowel lengthening : *tatari* "to wait", but *tāria* (passive), syncopated. See Williams & Williams (1862/1965 : 40). Best (1925/2005 : 197) mentions vowel lengthening in songs and ordinary speech "to stress the importance" of a word.

The practice of writing long vowels double (eg Biggs 1990) is due to the fact that they are often due to contraction of short V + short V. Thus it is known that Maori *ā* (colloquial) "what?" = Maori *aha* "what?", Rarotongan *a'a* "what?", Malay *apa* "what?". Compare Maori *whā* "four", Rarotongan *ā* "four", but Tagalog *apat* "four", Malay *empat,* Malaysian Banjar, Iban *ampat* "four", (Maori *pua* "flower", Rarotongan *ua* "flower"); also Meinhof's Bantu *v*ata "be flat" (extend hand), *v*ala "to count", Efik *bat* "to count", Igbo *a-babala* "wide and flat", PWS *búá, (ba)* "arm, hand" etc. The extended hand has four fingers (counting gesture).

Maori *whā* “four” is probably from a form *(a)pa(t)a, *(a)ba(t)a with *b* > *wh*, *t* > *#*, and refers to an extended hand of four fingers.

Milner in his Samoan Dictionary, (Preface page xvi), recognises long vowels with a “medial pulse of rearticulation” (alongside others without). This is good evidence for the origin of Polynesian long vowels from short. It is also interesting to compare Fijian *tagane* “man” with Maori *tāne.* Maori has lost the *g* = [ŋ] in this word, and contracted the short vowels to *ā.*

In Niger-Congo vowel lengthening is sometimes used grammatically (eg Westermann 1927 : 51, Ga *ba* “kommen”, *bā* “das Kommen”). One suspects this lengthening is due to an old postposed article, *la, a*. Vowel length is not systematically phonemic in most Niger-Congo languages, but does occur (Westermann 1930 : 2, Ewe, Boyd in Bendor-Samuel 1989 : 202, Adamawa). Adamawa (now linked to Nilo-Saharan) almost limits its distribution to (apparently) the position after root-initial consonants. Grammatical vowel length is more characteristic of Afro-Asiatic (*a, ā, i, ī, u, ū*) and Indo-European languages (Quantitative Ablaut). Santandrea (1961) : “reduplication...replaced...by lengthening final vowel” (Ndogo).

Maori long vowels often look as if they originated in affective contexts (like Niger-Congo ideophones), but in the historical language they are separate phonemes. This can be demonstrated by numerous minimal pairs : *pāhī* “strike”, *pāhi* “gloomy”, *pahī* “ooze” or “canoe”; also consider : *māhī* “ferment”, “putrefy”, *mahi* “work”. (Contrast Latin which has relatively few minimal pairs of this kind). Obvious differentiations or variations on a theme are quite common : *anganga* “aspect”, *angānga* “head, skull”, *māhaki* “abate”, *mahaki* “meek, mild”, *māhū* “gentle”, *mahu* “healed”, *kanapu* “lightening”, *kānara* “candle”, *āku* “my” (active), *aku* “my” (neutral), see Biggs (1990), *tana* (neutral), *tāna* “his, hers”, see Biggs (1969 : 47, 14.3) for the difference.

It might be argued that vowel length in Maori has its ultimate basis in the three long and corresponding three short vowels of Afro-Asiatic (which lacks *e* and *o*). Evidence of this is

the conspicuous rarity of long *ē* and *ō* after *r, m, n* (except in monosyllables) and the total absence of the syllable **mē* in Maori. Maori long *ā, ī, ū* are much more common. In monosyllables long vowels are the rule, unless the word is a particle. One suspects contraction (V + V) here. Maori long vowels can often be shown to be from contractions.

Tagalog originally had three vowels *a, i/e, u/o* (alternants) without a length distinction. Tagalog however lengthens the vowel of an open syllable when it is stressed (Rubino 2002:15). Malay lacks a length distinction. So historically Maori seems to go back to a 3-vowel system. Of the Maori numerals 1-10 only "four" *whā* has a long vowel. Compare Tagalog *apat* "four", Malay *ĕmpat* "four", but Fijian *vā* "four". Both Maori and Fijian must go back to a form **bata,* such as we find in Bantu *vala* "count" (from "hand").

On the other hand Maori retains a few examples of the rare Niger-Congo old *e* and *o* (Maori *peha* "a proverb", Rarotongan Maori *pe'e* "an old historical song", compare PWS *be* "time" ; Maori *pehipehi* "to ambush", PWS *bèl* "to cheat", Maori *popohe* "blind, stupid", compare PWS *bobo* "dumb, stupid", Maori *popō* "crowd around", PWS *po* "person" [Latin *populus* "crowd"]. Maori *kō* "girl" (vocative only) recalls PCS *ko* "woman", which goes back to Nilo-Saharan. The same word occurs in the Cretan Syllabary (Linear A) of c 2000 BC.

Light may be shed on the long vowels by comparing Maori *whā* "four" (four fingers to a hand), *whā-* "causative prefix" (= *whaka-*), *whāwhā* "take in the hand", with PWS *búá, búák* "arm, hand", Bantu *bóko* "arm" [*ua* > *o*], PWN *BÁK* "build". The Maori long vowel comes from PNC *A + *A (* BAKA "arm"). Maori *poko* "extinguish" may be from the same source (with *B > *p*). Similarly *whā* "be disclosed", *whāki* "disclose", from N-C *bà, bàl* "to count, to read", Bantu *bad, BÀD* "count", *vala* "to count" (Meinhof) has Maori long *ā* from PNC *A + *A (*BALA). (Maori causative prefixes *ta-* and *ka-* (= *whaka-*) also mean "hand" (hence "make") in Niger-Congo. Bantu *ka* "hand", PWS *ta* "hand", both monosyllabic > Maori short vowel monosyllabic prefixes.

VOWEL HARMONY

The question may be raised whether Maori ever had a kind of vowel harmony. Many words have the repeated most frequent vowel *a* (most frequent in N-C also) : *anganga* "aspect", *angānga* "head, skull", *arawhata* "bridge, ladder", *āwangawanga* "anxious". Maori *ara* "road" corresponds to Malay *jalan* "road" (with regular Maori loss of the initial and final consonant). Proto-Bantu however has *jidá* (Meeussen), *JÈDÀ* (Guthrie), Urbantu *ɣila* (Meinhof) "road". Maori *r* = Bantu *d/l.* With other vowels, Maori *hopohopo* "apprehensive", *kirikiri* "gravel", *toto* "blood", *raranga* "plait" for example. Similarly *āhuatanga* "circumstance", *akoranga* "doctrine, teaching" (*ākonga* "scholar" with long vowel), *ātāhua* "handsome" have all back vowels, *kihikihi* "cicada", *kite* "discover" have all front. Cf *mine/mene*[*i/e*]. In a sample of 50 Maori CVCV words, 23 words had mixed vowels (front with back), 23 had both back vowels, 17 had the same vowel (11 of them *CaCa*). In other words back vowels predominate (about 80 %). Why ? Was a lost *r* responsible ?

The vowel */a/*, in view of its high frequency, might be treated as ambiguous, coming from I front *a,* II back *a*. Maori, like Niger-Congo, changes I *a* > *e* (front), but also II *a* > *o* (back). Thus Maori *rere* "flow" < *rara, but *toto* "blood" < *dada. The word *pūkanohi* (from *kanohi* "eye, face") has a variant *pūkonohi,* with *o-o.* Both Maori and Niger-Congo also have traces of back *u* versus front *u (y).* This shows up in the word for "yam", PWS *kí, kú* as posited by Westermann, Maori *uhi,(uwhi ?)* "yam" and Maori *kūmara* "sweet potato", or "yam" [*k* > *h* > #], in *rua, rie* "two" etc. On the other hand there are numerous counterexamples to disprove [front : back] harmony for historical Maori. I consider the phenomenon, as far as it exists in Maori, is mainly related to reduplication, which introduces repetition of identical vowels (sometimes with length variation however) to delimit words.

In Niger-Congo ATR (advanced tongue root) harmony seems to have been original (Stewart 1967, 1973, 1989). But it may have arisen through loss of the consonant *r*. ATR harmony involved two distinct series of vowels, in complementary distribution. It may lie behind

examples such as *toto* "blood" (< *dada, *d.ad.a, *t.at.a, with retroflex consonants). Retroflex consonants (African, Dravidian) did occur in early Polynesian, and involved an unusual tongue position (tip turned back). Maori *r* was sometimes written as *d* in early texts (Harlow 2001). Niger-Congo languages (Kru, Mande) tend to introduce *r* before/after a vowel (*r*-colouring, due to raising the tongue root). Niger-Congo *r* alternates with retroflex *d.*

Maori doesn't have the combinations *Cr* or *rC* that sometimes occur in Niger-Congo languages. But the lengthened-vowel plural may involve a lost *r*, as we have seen. I consider comparisons with South American languages would be helpful here. Tacanan and Chipaya have retroflex consonants, Chipaya has long vowels. One should also consider *n*-loss, which is probable where Maori has *ng* [ŋ]. This sound must come from *n + g, n + k* etc. The original source was no doubt *n(i), n(a)* etc. Niger-Congo prenasalised consonants are mainly medial and derive from weakened nasal infixes (once suffixes). Niger-Congo nasalised vowels were due to loss of *n* (ie *n(i), n(a)* etc). Again a possible explanation for lengthened vowels.

ACCENT

Biggs (1979 : 132) gives rules for word stress in Maori. A long (double) vowel, or failing that a "diphthong" (See Harlow 2001 : 11 – 12) takes the stress, otherwise the first syllable. Long vowels (and "diphthongs") are by far most frequent in initial syllables however. Particles (clitics) are generally not stressed. Nor are prefixes such as *whaka-*. See Harlow (2001 : 15) for the importance of morae (time units) and various exceptions. Partial reduplications stress the first stem syllable, complete reduplications have strong initial stress, with weaker stress on the initial of the second element (Harlow page 16). "Vowel length as a distinctive feature is relatively frequent in Adamawa languages" (Boyd in Bendor-Samuel 1989 : 202). However Boyd adds that "there is rarely more than one long vowel (or vowel sequence) within a single morpheme; it will generally follow what is, at least historically, a root-initial consonant. Long vowels are rare in ... inflectional/derivational morphemes". The situation seems

surprisingly similar to Maori. Long vowel roots may contain an old prefix (or reduplication) however.

Niger-Congo languages generally have a pitch accent (Ewe for example has pitch only), but some show word stress only (eg Swahili). Stapleton (1903), on Congolese languages, however, says (page 4) “In the Congo languages the main accent falls on the initial syllable of the stem”. This amounts to much the same thing as normally happens in Maori. In general we equate the Maori particles with the Niger-Congo prefixes. Samoan (Milner) puts an accent on the first element of long vowels with a “medial pulse”. See Loprieno (1995 : 37), for the Egyptian “Zweisilbengesetz” (oxytone or paroxytone stress).

It should be added that pitch and stress are neither independent nor mutually exclusive. See Rubino (2002 : 15) on “antepenultimate accompanying stress” (marked by pitch prominence or vowel length) in Tagalog. In addition to using a pitch accent, Proto-Niger-Congo stressed the first syllable of the stem (Campbell-Dunn 2006 : 157, ACCENTS). Westermann does not discuss stress in Niger-Congo, but admits it existed (1927 : 20) “in manchen Sprachen”. Compare Westermann (1911 : 76) on “Starkton” in the Sudansprachen. Pitch is common in South American languages, especially on a two-tone system, which is what has been tentatively reconstructed for PNC. Hinnebusch in Bendor-Samuel (1989 : 464) argues, following Carter (1973) that Proto-Bantu was tonal. Tonal accents tend to float. They are also used phonemically to distinguish word meanings, by changing the tone.

I see PNC as having both pitch and stress. PIE is variously reconstructed as having pitch or stress, and similar problems arise. Lynch (1998 : 82 – 83), following Bradshaw and Ross, associates high pitch with voiceless consonants. But voiceless consonants are typical of Maori, yet it has a stress accent. Harlow (2001 : 15f) mentions variations and exceptions in Maori accentuation. These may be due to a previous floating tone accent.

Compare Milner's comments on Samoan (xxi). The common Samoan pattern of initial low pitch followed by a syllable (in a group) combining "high or medium pitch with primary stress" recalls Greenberg's reconstruction of Niger-Congo with a low pitch on the noun prefix. It also supports my views regarding the connection between pitch and stress. Accent movement in Samoan suggests an earlier phase when the accent was one of pitch. See Pratt (1893 : 3) for shifted accents when an affix is added to a word.

In Fijian the final vowel is stressed if it is long, otherwise the penultimate. This again indicates that long vowels derive from two shorts, the first of which was originally accented.

In Malay the accent normally falls on the penultimate, (or on the last root syllable of prefixed monosyllabic roots). But it should be realised that "there is no strong accent on any syllable in a Malay word" (Winstedt 1927 : 31). This may indicate an earlier pitch accent.

The inference might be drawn that where a Māori word has more than one long vowel, the word in question is conflated from two earlier words. We regard old prefixes as derived from earlier indepemdent words ("noun" classifiers). See the following chapter.

THE NOUN

"The number of prefixes in Maori is exceptionally large" states Williams in his Dictionary of the Maori Language (page XXXIV). He adds that the force of these prefixes is largely obscure. This appears particularly true of nouns. Compare Maori *kōwhatu* "stone"*, pōwhatu* "stone" (PWS *ta* "stone" has prefixes *ku-, o-, ebe-, i-, de-*), or *kohu* "fog", *pūkohu* "fog". Niger-Congo has an elaborate set of about 20 nominal prefixes originally grouped into singular : plural pairs. Can we find evidence for any of them in Maori? Is Maori related to Niger-Congo? Or to Nilo-Saharan from which Niger-Congo came?

MAORI singular/plural ARTICLES

The Maori articles *te* (sing) and *ngā* (pl) are the same as Bantu prefix classes *de* 5 (sing) and *ga* 6 (pl) , mentioned by Williamson in Bendor-Samuel ed. (1989 : 9). The Gur form of *ga* is *ŋa,* exactly the same as the Maori. We posit a prehistoric form Pre-PNC **n-ga. (Dialect Maori has *nā* or *ka* for *nga*). Compare Vekens' (1928 : 18) *na, a* (sg & pl) articles. Bryan's (Africa 1959) T/K singular/plural pronouns lie behind this *te, ngā* distinction, showing it goes back into Nilo-Saharan. Articles develop from weakened personal pronouns. It appears that *nga* is sometimes postposed to plural words : *ringaringa* "hand(s)", *taringa* "ear(s)", *kōhungahunga* "child, infant", but also "fresh vegetation" ; *ngāuranga* "people who came by canoe" has *nga* both pre- and post-posed. Niger-Congo sometimes postposes "prefixes".

Whether these words in Maori should be called "articles" has been debated. Both Biggs (1969) and Bauer (2003) mention that they are class markers, ie classifiers. The N-C prefixes are really original classifiers. The Maori words *te* and *ngā* are not always definite (Bauer 2003 : 147). Biggs notes that *ngā* (plural) appears before some mass nouns such as "fire" and "water". But N-C prefix 6 is used of liquids such as water (6A, Williamson in Bendor-Samuel ed. 1989 : 38) and mass nouns in general (6B), usually in the form *ma.*

Johnston's Old Bantu (1919-) has Preprefix 6 **ga-**, Prefix 6 **–ma-.** Possibly *nga* is from earlier *ni* "animate plural" + PWS *gá(n)* "big, leader, chief", or *ka* "king, chief, grandfather". This would explain why neither Bantu nor Maori has the *–ni* plural suffix : it is contained in the plural article (as a preprefix). "Fire" and "water" were once animates (masc., fem. in Latin). The word *maha* "multitude, many" is possibly an example of an old plural Preprefix + Prefix treated as a single vocable. In fact *ma* must be from *m-ba. See the following paragraph.

The curious range of meanings of Niger-Congo prefix 6 *ma* " plural, dual, mass, liquid, water, faeces" is also attested for this element in Maori : *matariki* "Pleiades", *maihi* "facing boards on gable", *mata* "eye(s)" (= "lights") , [Indonesian *mata* "eye(s)", Thai *ta* "eye"], *māhanga* "twins", *maha, mano* "multitude", *ma* "inclusive" after names of persons, *mā* "and" (to connect numerals) *māpu* "herd", *makawe* "hair of head", *mākū* "wet", *mānu* "afloat", [but *manu* "bird", Indonesian *manuk,* Thai *nok* "bird"], *marangai* "rain" (E. dial.), *mā-* prefixed to names of streams; *ma* is postposed in Maori *turuma* "faeces" (compare postposed affixes in Gurma and Atlantic branches of N-C). The fluctuating length of the vowel goes back to N-C. This is the prefix best preserved from PNC into Kordofanian, regarded as very early Niger-Congo. Not vital in Maori. From PWS *ba* "one", "they"; *bà* "broad", "two", "swamp", "add".

<u>MAORI PERSONAL ARTICLE</u> See Williams (1971 : xxviii) on the accent.

The Maori personal article *a, ā* must be from Bantu *ya* "he, she, they" > *a* (Torrend 1891 : 161, on *mu, ba* etc). Maori has lost semivocalic *y-* on this word, which meant "person". The form exists in Maori as the pronoun *(d) ia* "he, she" (**di* + PWS *<u>g</u>i(a),* PNC *ghwi(a)). Forms with *w* also occur in Niger-Congo, showing there was an original labiovelar. This is a very significant detail indeed. As in N-C the prefixes occur before pronouns, so too in Maori if certain prepositions precede (Bauer 2003 : 143) *a* is required. "I" (*ahau, awau*) is an exception, as it already incorporates a leading *a-*. Some Maori words have this prefix fixated : *apa* "slave", "spirit of the dead", *āti* "offspring", *aki* "boy" (Tahu.), *ariki* "first born, chief, priest". (In theory *ba > wha > a, baba > ā,* might be the source of this *a, ā*). See Torrend.

In Bantu class 2 *ba* plural has a matching singular class 1 *mu* < *gwu,* often reduced to N-C *u.* This prefix *u-* perhaps occurs in Maori *uha* "female element", *uri* "offspring", *uretū* "father, male relative", *uru* "head, chief' (PWS *lu, du* "head"), and begins certain mythological names (*Uenuku* "a war god"). The form with *mu-* suvives in *muanga* "elder, elder child", *mura* "flame" (compare *ura* "glowing", *uranga* "glow", but, with reduplication, *mumura* "to glow"), *muri* "breeze", *murare* "vagrant", *muringa* "youngest child" (compare *uri* "offspring"). The prefix *u-* is from a pronoun, PWS *gu,* meaning "he", used also of animates in some N-C languages. Fire, water, wind etc were animate The concept of "animate" is vague. Early religion was animistic. Trees, plants etc had souls. Ancestors could become trees or birds. Wind, water, fire were seen as gods.

Linguists recognise an identical Niger-Congo prefix 3, *mu-, u-,* applied to "trees, plants, rope, broom, tail, road, fire" (Williamson 1989) : *uhi* "tattooing needle" (PWS *ki(n)* "needle"), *uku* "a fish" (= Bantu *cu(i),* PWN *KHUINI* "fish"), *uma* "bosom", *umu* "earth oven", *ure* "penis" ("tail"?), *uru* "head", singular only (= PWS *du, lu* "head"), *utu* "revenge" etc. Again there are *mu-* forms : *muka* "flax fibre", *mūrau* "byword", *muri* "back". Bantu has a plural prefix 4, *i-,* which matches prefix 3. Possible Maori examples are : *ihi* "power", "incantation", *iho* (= *uho*) "heart, pith" (of a tree), *iho* "umbilical cord", "lock of hair", *ihu* "nose", *ika* "warrior" (usually slain), "troop". It is clear from these examples that the plurality of this prefix was being lost, as it was in Kwa for example. Here too there was a form *mi-* (< *gwi*) : Maori *miha* "distant descendant", also "young fronds of fern", *mikao* "finger", *miki* "buttocks", *miri* "cloak", *miro* "thread". Preprefixes occur in : *mimiki* "ridge", *mimiko* "young shoot, gooseflesh", *mimira* "lashing", *mimiti* "low water". A number of these words have both nominal and verbal function.

Dempwolff (1934 : 50 – 51) lists vowel-initial words preceded by a type of glottal stop, "weichen Stimmritzen-Verschlusses", in the Indonesian Ursprache. This represents a lost Niger-Congo initial consonant. Glottal stops are often found at word-juncture. For example

Malay (Malay Peninsula) converts final “k” to a glottal stop. German uses glottal stops before initial vowels, even in compounds. Polynesian orthographies tend to omit them.

The semantic categories, based largely on Bantu, do not fit exactly. Prefix *u-* appears to favour singulars, as it did in N-C. The use of *a-* for both singular and plural also fits the general N-C data. Thus Guang has *bā, obā* “some, someone”, *ba* “they”, but Tschi *abeny* “they” (*-ni* pl) ; perhaps we should compare Maori *whae* “madam”, *whaea* “aunt” (*whāea* plural in some dialects), *āwhai* “spouse”, and with *u-*, *uwha* “female animal, sow” or “woman”. But PWS also has *bá* [with acute accent] “chief, sire, father”, Maori *pā* “Sir” [with long vowel = PWS acute] ; with prefix, *apa* “slave”, “company of workmen or slaves”, but also “spirit of one dead inspiring a medium”. Apart from the accentuation this appears to be the same word. The word *ipo* means “darling”. Probably related to *ba* “child” (Adamawa-Eastern).

In any case we have found Niger-Congo prefixes 1, 2, 3, 4, 5, 6 all surviving, if not “alive and well” in Maori, as articles or fossilised affixes. This cannot be an accident. It proves a genetic relationship between Maori and Niger-Congo (ex Nilo-Saharan). We have even found some ossified Niger-Congo preprefixes. What could be more conclusive ?

[The distinction between *wh* < *b* (fem) and *p* < *b* (masc) in these words may be due to the ancient central African practice (eg Tlingit) of mutilating the lips of women (Jakobson in Troubetzkoy 1949 : 370). Women could not speak on the marae, and wore tattoos around the mouth, or were not tattooed but painted red like slaves, who lacked a genealogy (Simmons 1997). They were not allowed to eat human flesh. In Africa women were denied human flesh, on the grounds that they had no soul. Niger-Congo had fortis & lenis stops, *b, bh* etc].

MAORI INDEFINITE ARTICLE

The Maori indefinite article *he* "a, some" appears to be from PWS *ka* "flesh, beast" [*k* > *h, a* > *e*]. Westermann (1927 : 303) derives the prefix *ka/ke* "Tiere, Deminutive" from this root. Such a view fits the notion that N-C prefixes come from classifiers. Welmers (1973: 165) numbers the prefix *ka-* as 12 singular. But Meinhof treated it as 13 plural. The number behaviour of this prefix is anomalous. Likewise Maori *he* can be both singular and plural (Ryan 1994 : 219). The Benue-Congo language So (Cameroon) has a parallel language heSo (eSo) in the Congo, with this element. Compare He-rero (B-C). Also Heiban = He + Iban (Kordofanian), and, with *k,* Keiga = Ke-iga (Kordofanian). Maori has *heketua* "privy", *hewa* "bald" (PWS *kuá* "be bald", Yoruba *ekpa* "baldness"), *heru* "hair comb", *uru* "head".

MAORI INDEFINITE PRONOUNS

Maori *tētahi* "one, some" (*tahi* "one"), plural *ētahi* "some, certain". These are practically the same as the singular and plural articles *te* and *nga* (variant *ē*), + *tahi.* Stapleton (1903 : 141) mentions a Lunkundu *-e* which stands for *-nga* in Narrative tenses. These expressions, like the articles, precede the noun. For *tahi* compare *taki* "stick" : literally "the stick NOUN". The *tahi* is a classifier, as in Malay, Chinese etc.

LOCAL NOUNS

"There are certain nouns which are invariably used without a definitive" (Williams & Williams 1862/1965 : 13), ie without an article, "though the force of a definitive must be expressed in translation". Some words "with a time signification" belong to the same category, they add. Now words indicating place (including placenames) have a fixated (dead) article in many languages. It is well known that expressions of time are often based on spatial concepts. Hence the connection. Spatial expressions themselves originally referred to parts of the human body.

Biggs (1969 : 41) calls them locative bases. They cannot take a definite or indefinite article, says Biggs, but can follow locative particles *ki, kei, i, hei* directly. However they do take the personal article *a* when they function as subject, states Bauer (2003 : 73), which suggests personification. She also mentions that all place names are grammatically local nouns. On page 13 Williams & Williams give a list of these words.

Prominent on the list is the word *tātahi* "the sea shore". Since *tahi, tai* means "sea, shore", and an article is required by the meaning, it is tempting to treat *tā-* as a singular article (rather than a reduplication), perhaps with an embedded *–a-* that caused the long vowel. Further down the list come *tai* "the sea" and *ūta* "the inland, the dry land". We have already identified *u-* as a singular prefix-classifier. So is *tai* "the sea" to be analysed as *ta + -i* (the old Niger-Congo postposed definite) ? This analysis would provide the article required by the meaning. By contrast the *–hi* of *tātahi* "the sea shore" would need a different interpretation (say from PWS *kí* "dwell, remain"). Compare *tahaki* "the shore" (same list), with *ta* + PWS *ka* > *ha* "side" (seaside) + *-ki* (= *hi* "remain") and *tahatai* "seashore" : *ta* (article) + *ha* (side) + *tai* (sea). In fact the Niger-Congo articles were sometimes omitted, as on our word *tahaki.*

The long vowel of *tātahi* is explained by *tāwāhi, tarawāhi* "the other side" (of a river or valley) : *tara-* > *tā-*. The *wā* is PWS *kua* "go, road" (with infixed *a* article) "outside", or *ka, kia* "side"?, the *–hi* is "remain". Compare also *tawhiti* "the distance", from *ta* + *whi* (PWS *bi* "place") + *ti* "small". *Waho* "the exterior", with *ho* < PWS *ka* "side".

Singular prefix 11 *lu, lo* (> Maori *ru, ro*) "one of many things", occurs on Maori *runga* "the top" (PWS *lu, (du)* "head", a typical classifier) + Bantu *coko* "top point", Guthrie *GÒDÒ* "top", PWS *gán, (gá)* "high", "exalted", with infixed *n = ni* "be something" ; also on Maori *roto* "the inside" (PWS *tía* "middle" –of the body-, *túa* "front, forehead", also "side", Bantu *kati* "in the middle"). Thus *tua* means "the other side", with postposed *–a* "the". Compare *taitua* "the further side" (of a solid body), with *ta + i* "in" ?).

Plurals are not numerous on the list, but do occur. Thus *nehi, neherā* "the ancient times" has the plural prefix 10 (Proto-Bantu *li-ne,* without the preprefix, see Welmers 1973 : 165). The root is PWS *be* "time", with *b* > *p* > *h.* This root has a nasal prefix in Igbo, and suffix *–re* in Tschi, Guang, Sussu, (= *rā* "day" ?). The root is probably Bantu *beng, beek* "shine", PWN *PEM* "shine". Guthrie's Bantu has *(BÁD)* "shine", which shows the *e* is from earlier *A. The vowels *e & o* are always secondary in Niger-Congo.

Other time words are *napō* "last night" (*na-* "that", "past"), and *namata* "long ago", *nanahi* "yesterday", all with *na-* "that", "this", "then" (Westermann 1927 : 261), used as a prefix-classifier. The word *namata* "long ago" includes also plural prefix 6 *ma* (after *na-*), then *–ta* = PWS *la, (da)* "day". This is seen in *tahirā* "the day after tomorrow", also "the day before yesterday", with *hi* "abstain" (PWS *kì*), *ra* "that" (remote), *a* "article (*ra* + *a* > *ā*).

Niger-Congo recognises prefixes of place (= English prepositions) : Bantu 16 *pa* "on", 17 *ku* "outside", 18 *mu* "in". Williams & Williams' list has *mua* "the front", *muri* "the rear", also presumably from *(m)u, ūta* "the inland", *ūta* "the dry land"; *pahaki* "the near distance", from *pa,* but no examples with *ku* "outside". We suggest *kūmore* "headland", *kūwaha* "gateway", *kūwhā* "thigh", *kūreitanga* "point of the nose"; *pāhuki* "screen of brushwood", *pāiri* "washboards attached to side of a canoe", *pākai* "bulwark", *utu* "front of *whare*", *uranga* "pillow".

Speaking of these "locative classes" in Bantu Welmers (1973 : 167) says 17 *ko* refers to remote or general location. Williams & Williams give *kō* "yonder place", *kōnei* "this place", *kōnā* "that place". That is, *ko* is an alternative form of *ku.* Prefix 16 *pa* refers to "near or explicit location" (Welmers). We take all of them back to African nouns or pronouns.

OTHER BANTU PREFIXES

Bantu prefix 8 *bi* is plural of 7 "custom, method, tool", whereas Bantu 19 *pi* is a diminutive. Both 8 & 19 > Maori *pi.* Maori *piau* "axe" (iron), *piharoa* "European hatchet", *piharongo* "hard black stone used for making implements", *pihe* "girdle" (compare *whitiki* "girdle", with *b* > *wh*), *pīnaki* "war canoe", *pīnohi* "sticks, tongs", *pingau* "strings of a mat", *pioe* "dry firewood", *pīoi* "song sung while brandishing scalps", *pipi* "small wedge", *pīrori* "toy hoop" (compare *whiti* "hoop", with *wh*) must belong here. Prefix 7 (singular of 8) *ki* appears in *kīaka* "calabash", *kihau* "sprit", *kiko* "flesh", *kiore* "rat, mouse", *kiri* "skin, bark", *kiritoi* "sty" etc. Plurality is blurred here in prefix 19 (Welmers 1973 : 167). But these examples of 8 & 19 are very significant for what they exclude semantically.

[Other Maori words in *whi, pi,* such as *whiro* "evil", *whito* "dwarf", *pīari* "hunchback", *whio* "blue duck", *pikari* "chick", *pio* "young of kiwi" are based on PWS root *bi* "bad", and Maori *pī* "bird" (PWS root *pi* "to fly"). In other words they do not begin with a prefix but with a root (as often in Niger-Congo). Vekens (1928 : 126) has *bí* "kind of bird" N-S.].

Neither persons nor places occur in Maori with initial prefix *pi-* . The original Niger-Congo application of *bi-* to "custom, method, tool" excludes nouns of person and place. Our identification is therefore confirmed.

PREFIXES *KU-* AND *KI-*

There is some evidence for the Niger-Congo quantitative prefixes *ku-* "big" and *ki-* "small" in Maori. We mention only *kumi* "ten fathoms" which is related to Bantu *kumi* "ten" and *kiore* "rat" (small quadruped). In early times "ten" was regarded as a large number. Niger-Congo *ku* means "increase, big". The word *kiore* is related to *kurī* "dog". It is from *kikuri, with loss of the second *k* and vowel mutation: *u* > *o, i* > *e.* The original word *kuri* is Niger-Congo (Kwa) for "stomach", but then comes to be used for various quadrupeds: "rats", "dogs", "cattle" etc. In Niger-Congo the prefix *ki-* is often attached to small animals, "sheep", "pigs" etc. Maori *kīrehe* "dog" may be from **kikirehe.* Vekens (1928), Makere etc, has *kimvi* "very small", *kubibila* "a bird". (But *kire* "stick"). These prefixes go back into Nilo-Saharan.

OLD PREFIX *AI-*

The prefix *ai-* in Maori is found on *aituā* "accident, calamity", *aitu* "sickness, demon", which must be related; (it is also related to *atua* "god, supernatural etc"). Also found on *aitanga* "progeny". Compare Rarotongan *ai-,* "a sign of the plural used with certain classes of nouns" (Savage) : *ai-metua* "the elders", *ai-tupuna* "the ancestors", *ai-tuakana* "the elder brothers", *ai-tuaine* "the elder sisters", *ai-tungane* "male members of woman's family" (used by women). Perhaps a reduction of *(nga)ati*. This element has the plurality sensitiveness of Bantu Prefixes. But its great rarity on African tribal names (Aigang [Kordofanian, Nilo-Saharan, SUDAN], Aikwe, "Aiye [Khoisan], possibly Aizi = Ahizi [Kwa, Ivory Coast]) indicates it is of great antiquity. Yoruba has a "privative" (negative ?) prefix of the same form (Yoruba *àìsàn* "illness", *aiyé* "world", *aiku* "everlasting" etc). Compare Malay *aib* "disgrace", *aiyar* "swindler". I suggest the old PPN word *sa?i "bind" may be connected, with *-?i > PWS *kì* "abstain" (religious). This would have the right associations. Binding was used in magic (Frazer 1987 : 559). The prefix *tai-* is of uncertain meaning : *taikaumātua, taitamariki, taikuia, taitapu* etc. Compare *tai* used as a term of address. It may mean "inhabitant". Compare *taiao* "country". But perhaps it is from *tani/e* "man" (*n*-loss).

MAORI DEMONSTRATIVES

The demonstrative adjectives *tēnei* "this", *tēna* "that", *tēra* "the other", with plurals *ēnei, ēna, ēra,* also incorporate the singular and plural articles *tē, ē,* with Niger-Congo demonstratives *ni, na, la/ra* following. Torrend (1891: 173) states that the formula for making demonstrative pronouns in Southern Bantu is: "a kind of article + connect. pr. + suffix". Demonstratives precede their noun in Maori. Contrast Congolese demonstratives which normally follow (unless foregrounded) ; but when used adjectivally before the noun the Demonstrative in Ngombe has a "kind of article" (*i* or *e*) prefixed to it. Likewise Kele puts a particle *e* before some adjectival demonstratives. Niger-Congo *la/ra* follows the noun when used as an article, but may precede when demonstrative. Generally the Niger-Congo demonstratives follow the noun.

The Maori distinction between *–nei, -na, -ra* recalls the three-way distinction found in Grasslands Bantu (Watters & Leroy in Bendor-Samuel eds. 1989 : 443) 'between "this" near speaker, "that" near hearer, and "that" far from both speaker and hearer'. Grasslands Bantu belongs in the Cameroon, Greenberg's Niger-Congo Urheimat. Biggs (1969) treats the matter on page 22. He points out that *tēnei* "this" can be split : thus *tēnei tēpu* "this table" becomes *tē tēpu nei*, without any difference of meaning. Which confirms our argument that the *tē* of *tē-nei* etc is an "article".

MAORI INTERROGATIVES, POSSESSIVES

These have similar morphology and word order characteristics to the preceding. See Williams & Williams (1862/1965 : 19f). In all these expressions the singular : plural possessive (article) = Bantu singular : plural prefix pair 5 & 6. Ryan's (1994 : 219) example : *to koutou whare* "your house", versus *o koutou whare* "your houses", incorporates the same distinction. Welmers (1973 : 165) makes *to* a singular Bantu prefix, but regards *ku, ko, xo, o* as "neutral". In general Niger-Congo *ku, ko* is singular, but is also used for some plurals (Sapir 1971 : 80, 81, note 11). The etymologies of these words are clearly Niger-Congo, as are the semantic distinctions made between "near person speaking", "near person addressed", "remote from both of these". For *to* compare *pū* "double, bunch" with *tōpū* "pair". Also possessive *tā* (sg), *ā* (pl) = *ngā. Āpū* means "move in a flock or crowd", also "company", plural concepts. The religious notion of *tapu* is singular (but *taputapu* "goods").

FOCUS MARKER

The Maori focus marker *ko*, used before proper names, pronouns and common nouns preceded by a definitive, appears to be from PWS *ka* (*ko*) "finger, hand, side" ("side" according to Harlow, PWS *ka (kia), kan* "side"). It conveys the notion of pointing or foregrounding. [*a* > *o*]. It has an affinity with the articles. [Nilo-Saharan **kOr* "rib, side"].

FRONTING

Maori moves elements to the front of the sentence for foregrounding or emphasis, putting an article before the item emphasised. This happens for example in nominal equivalence constructions which would mostly have the verb "to be" serving as copula in English. *He whare pai tēra,* "That is a good house". *He mere, te mea nei,* "This thing is a greenstone club". The copula does not exist in Maori or Niger-Congo. English phrases such as "The more the merrier" have the same structure.

Ko may likewise be used to make verbless sentences which front the emphatic predicate : *Ko Hamo tōna ingoa,* "His name is Hamo"; *Ko tōku whare tēra* "That is my house". Ancient Egyptian too has a prominent group of non-verbal sentences (Gardiner 1957 : 34f) introduced by *íw*. These constructions must therefore be regarded as early African. We regard both *ko* and *he* as derived from ancient classifiers. Egyptian *íw* is said to be the verb "to be" (but is probably from an old word for "hand", Semitic *y-a-d* "hand", PWS *nú, ní* "hand" > *i*).

Preposed Maori *ma, na, no* may be used to put focus on the subject (or other sentence element), with shift of the subject to the beginning of the sentence : *Ma Pita e haere.* "Peter will go" (Biggs 1969 : 73). Here Maori changes VS to SV (normal in N-C).

The focus particles derive from Niger-Congo nouns and demonstratives such as *ka* "hand", "side", (*kua* "side", "foot"), *ma* "back", "that", *na* "foot", "that" etc. Many of these are also used as Niger-Congo negatives. Eg *mà* "back", *mà* "not", *má* "this", *nà* "foot", *na* "this", *na* "not", *ka* "side", "hand", "not". Differences of accent are not always reconstructible. Note that often the same roots also function as verbs : *na* "come", "be" etc.

In prehistoric times grammar did not exist. Scholars have treated the Niger-Congo basic word as a verb (Westermann, PWS), but also as a noun (Meeussen, on Pre-Bantu). Perhaps it is not appropriate to raise such questions. All languages use "nouns" and "verbs", or refer to things

and actions, processes etc. Maori words often shift from word class to word class like a chimaera. But see the Postscript for further comment.

CLASSIFIERS

The Maori prepositives used with the noun have much in common with the classifiers found in Malay etc (Dey 2004 : 45). See Lynch (1998 : 110 –115, 118 – 120, 121 – 122, 126 – 128). They have their origin in ancient patterns of NOUN (classifier) + NOUN (classified), that is old constructions that went from GENERAL to SPECIFIC. The Niger-Congo pattern Preprefix + Prefix must have once been a reduplicated indefinite preceding a specific noun. Compare NUK *hia-* "fruit prefix" (classifier). One thinks of the written Egyptian postposed determinatives here (Gardiner 1957), but also of the classifiers in Malay, Thai and Chinese. These classifiers were originally indefinite nouns, but became classifiers.

Diop (1977 : xxvii, note 5) detects Niger-Congo type classifiers in postposed position in Egyptian, which he compares with Wolof (Atlantic). In chapter I, pages 1ff, he pursues this argument, quoting consonant mutated forms of the pronoun *ba "person, this" in singular and plural. He notes on page 2 that the true plural of the demonstratives had fallen out of use in Middle Egyptian. He also deals with pronominal *ta "there, yonder" and *na "this". No doubt this is why Egyptian Hieroglyphics postposed the determinatives.

Some N-C languages (Fula, which is an Atlantic language, Gurma languages, secret languages) postposed the classifier to nouns, or both preposed and postposed it (eg Tobote, a Gurma language, has *ke-bí-ke* "child"). Biggs (1969 : 49, 109) recognises *nei* "near speaker" and *anō* "again" as biposed particles, used before or after. See also Biggs page 72 for postposed *ana, ai* (verbal markers).

See Leenhardt (1946 : xix) on syllable inversion in New Caledonian languages. Secret languages occurred both in Africa and Oceania.

SUFFIXES ETC

Williams in his Dictionary (pageXXXV) observes that "the number of suffixes in Maori does not appear to be as great as the prefixes". The verb had the most obvious formations. In Niger-Congo noun suffixes seem to have been relatively rare. Most important were the postposed articles and demonstratives. See p. 127 SWIM *hoe* (verb), *hoea* (noun) "paddle".

FOSSILISED N-C ARTICLES

Many Maori nouns end in *–ra,* but verbs seldom have this termination. Example *kumara* (PWS *ku* "yam"), with *ma* "mass", *para, pāpara* "blood relative", *kōpara* "bell bird", *pango* "black", *paoa* "smoke". One suspects that *–ra* = the N-C postposed article/demonstrative *–la, -ra, -a* "that" which tends to be lost or fossilised in most historical Niger-Congo languages. It is practically non-existent in Bantu languages. This element goes back into Nilo-Saharan, and indeed back to Afro-Asiatic, as can be seen from ossified survivals in Arabic and Caucasian proper names. Malay "emphasises" nouns by adding *–lah.* Compare also the Maori words *rā, rārā, ra* "there, yonder". The development of prefix-classifiers rendered it obsolete. The old dem. *la, ra* is from older *la "person", Maori *rae* "person", *Dasas* (India), *Lasas* (Etrusc.)

Pratt (1893 : viii) in his Grammar and Dictionary of the Samoan Language states that "Names of places at a distance, of families and some other words have a long vowel at the end". I interpret this long vowel as from ACCENTED SHORT VOWEL + 2nd SHORT VOWEL, and derive the second short vowel from the Niger-Congo postposed article/demonstrative *–la, -ra, -a* (also *–le, -re, -e*). See Milner (xvi) on the Samoan "medial pulse".

Maori also has the Niger-Congo formant PWS *na* "this", seen in *tēnā* "there", but used after words and clauses to indicate "position near" (Williams 1844/1971). In Niger-Congo this becomes a second article, and is attached after placenames, eg in Nigeria. Pawley (1989) mentions the use of *na* as an article in Proto-Polynesian. Postposed *–na* practically never occurs on Maori placenames. Maori words such as *puna* "spring", *tupuna* "ancestor" (prefix

10 *tu-*, pl. coll. dim.), *tuna* "eel", *rana* "net" have postposed *–na* reduced to a derivative suffix. The old N-C demonstratives survive in the lexicon, but their original force has been lost. They are no longer "articles"/"demonstratives". Malay postposed *-nya* has the same origin (Dey 2004 : 50).

THE N-C DEFINITE

There are survivals in Niger-Congo of a definite in postposed *–i.* The feature is most common in Mande languages, (sporadic in Kwa), but also crops up in Nilo-Saharan (Songhai dem/art *–di,* Meroitic article *–li*). Compare the Swahili preposed demonstrative *ndi-*. It seems to occur on Maori nouns such as *wai* "water" (PMP **wa(h)iR*) according to Elbert (1964 : 405) compare Waihi, of a New Zealand river (an old Hawaiian word), *tai* "sea (coast)" (PPN **tahi,* Fijian *taci*), *kai* "food", (PPN **kai*), but also on *pai* "good" (PPN **paki* "fine weather"?), *wai* "who?" (PPN **hai*), *mai* "hither", (even verbs *whai* "follow" etc ?). Added *–i* has been described as a transitiver on verbs. In Māori *tiki* is "topknot", *tihi* is "top, summit". But *tiki* also refers to "primeval man", *Te aitanga a Tiki* "aristocracy". Compare Mande *tigi, tiki,* MS *tihi, tī* "master" (Delafosse 1929 : 162, § 319). Māori *tikitiki* is "girdle" however.

In the case of *kai* "food" a noun/verb distinction may be lacking. Other nouns such as "water" and "sea coast" have a reconstructed consonant before the *i.* Fijian suggests that this consonant was originally *k.* Maori has numerous doublets such as *tai, tahi, taki*. Even Maori *mai* "hither" may include a transitiver. The word must be from the Niger-Congo demonstrative *ma*. We posit **-ki* "make" > *-i*. But *wai* "who ?" recalls Bantu *wai* "where ?", "which ?", Bangi *wani* ?, Soko *hai* ?, Swahili *wapi* ?

As far as verbs are concerned, it is worth remembering that TogoR suffixes *–i* to verbs. The Egyptian Old Perfective (pseudo-participle) shows a postposed *í* (Gardiner 1957: 235), possibly = "to be". Compare Gardiner (1957 : 108) on "adjective verbs" in Egyptian, meaning be good, be beautiful etc". See also Vekens (1928 : 137) on the Mangbetu *i* "suffixe au verbe" (place, time), with meanings "now, here, already, because, then".

Whether this element *-i* in Maori always comes from a Niger-Congo definite/demonstrative is unclear. It may be best to take *–i* on nouns etc as a definite, *-i* on verbs as from *yi* "be". The suffix *-hi* (seen in Tahiti "small coastland"), also *–ki,* is distinct and unrelated. See below on *–ki* "make", "remain" etc.

In any case we conclude that the Maori "articles" all appear come from an early African language, which we provisionally call Pre-PNC. Westermann's PWS is an approximation of this. Lynch (1998 : 110f) shows that Oceanic languages vary greatly in their number of articles, just as Niger-Congo languages vary greatly in their use of prefixes. Maori seems close in some ways to Mande, an early (disputed) subgroup of Niger-Congo, connected by some with Songhai (Nilo-Saharan). But Mande lacks prefix-classifiers. Some Oceanic languages lack the article.

OLD PLURAL SUFFIXES

Mande languages have a plural suffix *–ri* (= plural prefix 8). Outside Mande in Temne (Atlantic) *kabari* "twins", Kissi (Gur) *bir* "breast(s)"; often on tribal names, especially in Nigeria : Itsekiri (Yoruba), Gbanziri (Adamawa-Eastern). Maori *uriuri* "offspring", "race", *tuauriuri* "many". We find this *ri* preserved in Maori *tamariki* "children" : *tama* + *ri* + *ki*, with singular *tamaiti* (*iti* "small", a fossilised adjective), and *manuhiri* "guest(s)". The same *ri* suffix occurs in *Matariki* "Pleiades", again followed by *–ki,* also a plural marker (Maori *kī* "full", "crowded" [with reduplication]. The *–ki* is from PWS *gi* "to fill, be full", used as a plural in Nilo-Saharan Aramanik, in Benue-Congo Baloki, Bunaki, Jaranci = Gingwak (reduced to *–k*), likewise Bedik (Atlantic). The reduced form *–k* is ancestor of the Indo-European plural in *–s.* Such linguistic fossils are historically important. Basque *–riki* "plural".

The animate Niger-Congo plural suffix *–ni* (Williamson in Bendor-Samuel 1989 : 37, Mande, Kru, Adamawa-Eastern, Dogon etc) apparently does not occur in Maori, unless *tini* "very many" (with N-C "small plural" prefix *ti-*) is an example. It is common in northern

Nigeria, and Cameroon, but does occur elsewhere in Africa (outside Niger-Congo). Presumably it was lost in Maori (due to plurality in the articles – *nga* = *ni-ka* ? ; compare Bantu), or developed after the Maori language left Africa. It is not found even on Maori placenames. Its absence puts Maori back beyond strict Niger-Congo into Nilo-Saharan (pre-Mande, as Mande uses this element). Nilo-Saharan *N* is singular (pl *K*), which may be relevant. Probably *N* > **nt*. Compare Bantu prefix 9 *ni* "singular animal", not clearly distinguished from 10 *ni* "plural".

In a comparative context note however that NUK, PIL, SIK, KAP have an "indefinite article plural" *ni* (Pawley 1966 : 52) which is preposed. PPN **ni* "near speaker in time and place" is however reconstructed as "postposed position-marker" (Pawley ibid.). Compare Greenberg (1963 : 113, 22.) on Loc. pl. *–ni* in Eastern Sudanic and Chari-Nile. PWS has *–na, -ni* "this", used with various prefixes. Compare PPN **eni, *ena,* which are replaced in Maori by *nei*.

NOTE[1] : The Niger-Congo Definite *–li, -di* appears at the end of Aztec names such as Naápatecuhtli, Ometochtli, Metzli, or (reduced) Centéotl, Tepoztécatl etc. (The *–tl* is a click). Similarly, with Niger-Congo demonstrative *–n* (reduced) Xilonen, Centzon Totochtin (plural, < *-ni*); Camaxtle (god of Tlaxcala) has *–le* < *-la*. There is other evidence for Niger-Congo influence in Central America, not to mention the Maya script which represents omissable final consonants (before lost final vowels), indicating Niger-Congo type reduction of disyllables to monosyllables. This is not the place to explore such matters further.

NOTE[2] : The old Niger-Congo demonstrative/article *–la* was once a noun. Maori *ora* "slave", *rae* "person" (old), *ranga* "company of persons", *rangatira* "chief", *e rangi* "sir"; Malay *laki* "husband" (old *–ki* suffix), *anak laki-laki* "boy". Malay *orang* "person". See PRONOUNS.

ADJECTIVES

Niger-Congo has few real adjectives (Stapleton 1903). Longando (Bantu) has no adjectives at all. It uses nouns (Tuerlings). Maori adjectives sometimes have a fossilised vocalic prefix : *anu, anuanu* "cold", *ari* "clear, visible", *ika* "tight", *ikeike* "lofty", *uri* "dark green", *umaraha* "wide", like Niger-Congo adjectives and numerals. Compare Pratt (1893 : 8), Samoan, *a-*, *ma-*. In Bantu the prefix is often mapped from the Subject Noun onto the following sentence elements. This is hardly possible with Maori VSO word order.

In Maori as in Niger-Congo adjectives may come from nouns or verbs : *atua* "god", but also "supernatural", *haki* "meek", also "cast away", *pua* "flower, to bloom, foam, smoke" > *pūaho* "intensely white", *pakohe* "dark grey stone", *pango* "black, dark", "type of eel", *pāpango* "dark green", *wero* "stab, spear", *whero* "red, reddish brown", *kākāriki* "green parrot", "green". The word *ora* in Maori means "survive" but also "well, safe, alive". Pratt (1893: 8) mentions that in Samoan adjectives may be formed by doubling the noun: *pona* "knot", *ponapona* "knotty", *fatu* "stone", *fatufatua* "stony".

We have already seen that *iti* "small" (with vocalic prefix") is fixed after *tama* in *tamaiti* "child". Similarly in names such as Tainui (*nui* "great", *tai* " sea"), Mangatini (*tini* "many", *manga* "streams"). The adjective *pai* "good" follows its noun, (as does *kino* "bad"). Niger-Congo adjectives follow their noun. The *–i* on such adjectives as *pai* may represent PWS *gi* > *yi* "be". Compare N-C Ewe (Westermann 1930 : 96, 96) *atí lá kó* "The tree is high".

Adjectives convert to abstracts by adding the singular article : *te pai* "the good". Compare A. Greek *to kalon* "the good". For adjectives functioning as stative verbs with tense markers etc see Lynch (1998 : 115). Maori adjectives should not be accumulated. That is, the noun must be repeated before each separate adjective.

COMPARATIVES

Maori comparatives and superlatives may be expressed with preceding *tino* (compare Ngombe *no* "surpass", PWS *ti* "between"), or following *rawa* (compare Congolese *la* "with", PWS *ga* > *wa* "side"). Maori *te* (definite article) may be used for "superlatives" (really comparatives), compare Ngala intensive *nta*. Maori indefinite *he* forms an intense comparative, compare Ngala & Bangi *ka* (*ka* > *he*). Stapleton (1903 : 59, 60) regards the Congolese adjective as comparative by nature, as does Torrend. One is reminded in this connection of the use by Malay of (comparative) adjectives : *Kayu batu, bĕrat batu,* "Stone heavy, wood heavy" = "Stone is heavier than wood". Compare Maori *he tangata kē koe, he tangata kē ahau* "We are different kinds of people", where *kē* means "different". Literally "People different you (sg), people different I". Compare Ryan (1994 : 216).

For a brief account of Maori comparatives and superlatives see Williams & Williams (1965 : 25). Also Harlow (2001 : 33). A fuller treatment is given by Bauer (2003). Postposed *atu* "away" may be compared with PWS *tú* " to emigrate, go away", postposed *ake* "up" (compare *eke* "to mount") with PWS *kia, (ke)* "to walk, to go". Harlow likens the Maori comparatives to a "sort of ladder". The Maori *iho* "down" (used with "small", "bad") always refers to a superior position on a scale. It may be from PWS *kúá, (ko)* "kill, die". These words feature prominently in Maori comparisons.

Biggs (1969) does not use the terms "comparative" and "superlative". He prefers the term "intensive".

Egyptian (Gardiner 1957 : 47) has no comparative forms of adjectives. It uses the prepositions **b* (Semitic), *r* (< *jr*) "toward, more than" (Loprieno 1995 : 100). Compare Maori *rawa*, Yoruba *rò* "to reckon" (used in addition). Compare also the use of Egyptian *r* "part" in fractions (Gardiner 1957 : 196). Egyptian *w'* (*wa*) means "one, alone".

NUMERALS ("Decimal" System)

These are based on the hands, arms, legs etc (five, ten, twenty fingers & toes), and other objects such as sticks, spears, shells and stones used for counting. (Compare the African use of beads and brass rods). The numerals were not abstract. They came from concrete nouns. Methods of counting varied from place to place. Fingers were progressively raised to show the numbers required, as mentioned eg by Beattie (1994 : 99). For this procedure in Africa compare the descriptions in Stapleton (1903 : 108), Homburger (1949 : 198f), De St Croix (1945/1972 : 11). Linguistic gestures were also used by the Maoris to indicate words or syllables (Best 1925/2005 : 119). Objects were ranged in rows. Subtraction was used. But counting by pairs (usually to twenty) was also common : *pū, tōpū* "pair" . Total = *nui* "many".

Some of the Egyptian Hieroglyphs represent men making gestures (or show string figures (Andersen 1927, Republished 2000- Steele Roberts), compare the Maori "cat's cradle"). Early numerals (Egyptian, Linear A from Crete) were marked by showing vertical lines for 4 or 5 fingers (hand = 1111, or 11111) or horizontal arms in pairs (= for "ten"). Three vertical strokes "many" indicated the Egyt. plural. The human body was the basis for early language.

1. *tahi* < PWS *ta* "hand", Old Bantu *dala*. Root *tá* is used for counting, and also for (*ta, tali*) "stone". PWS Root *ki* "small". Maori *taki* "rod", Bantu *tonga* "stick". Maori *tao* means "spear" (used in counting)**.** Maori **s**tick games involved counting. Maori has *tahi* for "one" after *ka* . Palwan (Taiwan) has *ita* "one". Nilo-Saharan *d:* "club, stick" (Heine & Nurse). Iban (Borneo), Malay *satu* "one" [*t* > *s*].

2. *rua,* Maori also has *rie* "two", also *rienga* "two", with *nga* > *ka* "finger". From PWS *bà* "two", with a prefix. V Djola has *lu-ba* "two" > *ru-wha* > *ru-wa* > *ru-a.* III Avatime *o-ba* "two". Bantu *BÀLI* "two, twin" reverses the order of syllables. Palwan (Taiwan) has *d.usa* "two" (retroflex *d.*), Atayal (Taiwan) has *rusha'* "two". Proto-Austronesian **Duwa* "two".

The *du-, ru-* on these words is Bantu prefix 11 *du* “one of many things” (head). Similarly Maori *rie* incorporates Bantu prefix 5 *di* “singular of 6” (6 “paired things, multiples”). In other words the original lexeme referred to a pair (of heads). Compare English *both* (from Efik *bat* “to count” ?). PWS *bà* “two”. One is tempted to compare Latin *duo* “two”, Vedic Sanskrit *duvas, dwas* etc. Maori *pūrua* “do a second time”. Iban, Malay, Banjar *dua* “two”. Maori *pūrua* “pair”.

[Fijian has *dua* “one”, which is also used as an article. This Fijian word can be attached to plural nouns however. Fijian *duarua* means “feet of a human to be cooked and eaten” (obsolete). Again the notion of “pair” is original].

3. *toru* < *ta* + *ru,* with *ru(a)* “two” as above, + preceding *ta* > *to.* Compare Palwan *cəl.u* “three”, Sanskrit *trayas* “three”. This item does not match Malay languages.

4. *whā* < PWS *bà* “count”, also “two”, PWS *búá* “arm, hand, finger” (with a common form *ba*), Bantu *bóko* “hand”, *bad* “count”, Meinhof’s Bantu *vala* “count”, *vata* “be flat” (extend). A “hand” might be four fingers (without thumb). Early counting went “one, two, many” or even “one, many”. Or “one, two, finish”. Palwan *sapac* “four”, Atayal *shupat* “four” both have *–pa-* from PWS *ba.* Malay, Banjar, Iban *ampat*. Maori lacks the prefix *am-* and suffix *–t.*

5. *rima* < Bantu *lima* “to end, extinguish” (PWS *ma* “finish”). “Five” finishes the hand.

Palwan *l.ima,* Atayal *tima’* “five”. Banjar, Malay (Jakarta) *lima,* Iban *lima’.*Cf Peruvian Lima.

6. *ono* < PWS *nú* “hand, arm” (hand of five + arm = 6 ?). Degha *noni* “arm”, Siti *noŋne* “arm”. Prefix *o-,* Palwan *unəm* “six”. Iban *nam* “six”, Banjar *anam,* Malay *enam.*

7. *whitu* < (Bantu *–tu* is attached to *tanda-tu* “six”); *-tu* means “take away” *bi* “a little”(subtractive numbers) from “ten”. Such subtractive numerals occur in Africa. Atayal *pitu’* “seven” is the same as the Maori. Banjar *pitu* “seven”, Iban *tujoh* “seven”.

8. *waru* < PWS *ba* "hand, arm" + *ru(a)* "two" (hands) [8 fingers]. Atayan *pat* "eight", with PWS *ba* > *pa.* Banjar *walu* "eight".

9. *iwa* < PWS *ba* "hand, arm" > *wha* > *wa.* Palwan has *siva,* with prefix. Some Polynesian languages have an initial glottal stop : *'iwa.* Gur *a-wa* "nine".

10. *tekau* or *ngahuru.* The latter has the plural article + PWN *PU* "finish" (end of hand), seen in Mande-Fu ("ten"), Bantu *PÓ* "to cease", *pó* "to end". Bantu *kumi* "ten", "large number" appears in Maori *kumi* meaning "ten fathoms**"** (Hawaian *'umi* "ten"). For *tekau* "ten" compare Ewe *a-síd.èké* "hand one", literally "remain one (from) hands", that is "nine". PWS *ka* means "hand, arm". See Westermann (1930 : 98, 99). Malay (Jakarta) *sa-pulu,* Banjar *sa-puluh,* Iban *sa-puloh* "ten", matches *nga-huru* = *nga-pulu.* Maori *ru* = *lu* "two". Pratt (1893 : v) translates Malay *puluh,* Samoan *fulu* as "feathers" (PWS *pu* "feather").

"First" (adverb) is Maori *mātua, ātua* "first". For *tua* , Bantu *tu* "head" compare *tuatahi* "once"(*tahi* "one"). The *mā-* is Old Bantu *mω* "one". Maori *hia* "how many" is from PWS *gia* "trade, buy, sell". Malay has *kian* "many, so much". PWS *gia* "speak" may be relevant here.

That the Maori numerals come from Niger-Congo nouns can be seen from their flexibility in word class ("statives" says Biggs) and their use with prefixes such as *tua, ka, ko* (*ka tahi, kotahi, tuatahi*). In connection with a noun the numerals "two" to "nine" are preceded by *e* (or else *toko* in speaking of persons, PWS *túá* > *to* "forehead" + *kua* > *ko* "person"). This "particle" *e* occurs in Hawaian as *'e, 'a,* indicating it derives from earlier **ka.* It is a form of the plural classifier (**nga*). Malay has *angka dua* "reduplication". Both *kotahi* and *tekau* (used together for "ten") are nouns (Niger-Congo has numeral nouns also, followed by the thing counted as a possessive). In other words we have Niger-Congo nominal "prefixes" on numerals here. Distributives are made by prefixing *taki* to the numeral : *takitahi, takirua* etc. This too is an old (plural) classifier.

The Maori numerals, like those of Niger-Congo, normally (most often) follow their noun (Williams & Williams 1862/1965; Bauer 2003 : 280). The word "two" is fixed after dual pronouns. In Niger-Congo a few low numerals sometimes precede. Compare the Maori names Ruapuke (*rua* "two" *puke* "hills"), Ruamāhanga (*rua* "two" *māhanga* "forks").

The word *ruarua* (reduplicated) means "a few", as does *torutoru*. It weakens and converts to a quantifier. See Bauer (2003 : 35, Numerical Sentences, 275ff, Ch 18). Compare early African counting : "one", "two", "many".

I differ from others in treating the *e* before the numerals 2 – 9 used of things as a plural article or classifier. It is not used with "one" or normally "ten" (a bigger unit). A Niger-Congo "classifier" origin explains this. Numerals are therefore not verbs (as Harlow 2001 : 281 thinks), and *e* here is not a verbal marker (augment). Bauer (2003 : 206 – 207)is uncertain about this because of the ambiguous nature of *e* (noun & verb marker). Historically I *e* (from *ye* "go") and II *e* (plural classifier, = *nga*) are distinct. The Maori II *e* may be from **nte,* a hypothetical plural article, with **n* as plural marker. Samoan has *e* with all numerals however. And Moriori attaches *te* before "one" through "ten" (though *meangauru, ngauru, tearuaru* are all used for "ten"). See on the ordinals.

Before numerals referring to persons *toko* is used. Compare Bantu *ntu, NTÒ* "person", also PWS *tú, túá* "forehead", also PWS *lu, lua, (du, dua)* "trees" (persons were descended from trees), both with suffixes *–go, -γo, -ko, -gu.* The name Dogon (a tribe) may have the same origin (*do-go-n(i)*. In Maori *toko* means "rod". Harlow takes *ka* used before numerals in counting as "make". This word originally means "hand". It should be recognised that the terms "verb" and "noun" can be used only with reservations in talking about Maori and Niger-Congo.

[We have already mentioned that Fijian *dua* "one" is from a word for "pair". In Fijian the particle *e* precedes this numeral. In Samoan the expression for "one" is *e tasi.* Samoan also uses *e* before *sefulu* "ten". It has been argued that in Fijian *e* "disappears after a tense sign", and so must be verbal. Equally it could be said to disappear because it is a nominal marker and incompatible with tense. I consider that Maori preserves the original state of affairs, and that Samoan has generalised *e* before "one" and "ten" Due to confusion between I *e* and II *e*].

Maori preposed numerals also are to be treated as nouns, again with a plural article *e* preceding numbers 2 - 9. The N-C numeral has substantival forms, with its following noun as "objective genitive" (Westermann 1930 : 99). Preposed numerals are rarer because they are fronted. To keep HEAD + MODIFIER consistency it is also best to regard preposed numerals as NOUN-HEADS, followed by a possessive. Fronting for emphasis is a common device in Maori.

MAORI ORDINALS

Maori ordinal numerals used absolutely are made from the cardinal numeral by prefixing the article *te* (Malay uses *ke* preceded by the relative *yang*). In Kongo the Demonstrative Pronoun (which does duty for the Relative) is placed before the Numerical Noun. Adjectivally after a noun the lower Maori numerals prefix *tua* to form ordinals. This is PWS *tù* "amass" (+ *a* "old article"?), ie a "heap" classifier (Bantu *tunda* = PWS *tu(a)*). Samoan has *'o le* before the ordinals. Fijian uses *lē* before cardinal numerals applied to people, and forms ordinals by prefixing *ika-* to the cardinal form. Codrington says numerals in the Melanesian languages are used "as nouns, adjectives and verbs". The situation is complex.

NOTE : Pratt (1893 : 9 – 10) mentions that in Samoan "Very many things are counted each in its own peculiar way". Eg young pigs and cocoa-nuts affix *oa.* Coconuts are counted by the score (20, 40, 60). Fowls, breadfruit, and some shell-fish 1, 2, 3, 10, 20, 100. Crayfish, 10, 20. Fish 2, 3, 10, 20, 100, 200, 1000. Bonito 2, 10. Taro 2, 10, 20 etc. Bananas 1 bunch, 2 bunches, 10, 20. Masi, in round cakes or balls (*potoi*) 10, in flat cakes 10. The numerical terms used vary with the object. Again one thinks of the classifier principle. The numbers used, 10, 20, 100 suggest a decimal base.

PERSONAL PRONOUNS

As the name indicates, pronouns stand for a noun. Maori personal pronouns have singular, plural and dual numbers, and distinguish an inclusive and exclusive first person (Biggs 1969 : 36 – 37). Walters & Leroy in Bendor – Samuel eds.(1989 : 443) state that in Southern Bantoid there are "more complex systems, which may include an inclusive/exclusive distinction and ...pronominal forms with plural or dual-plural number" (Grassfields and Beboid languages, Cameroon). Since we have already found connections between Maori and Bantu, this is not surprising. The personal pronouns mostly develop from demonstratives : "this person" = "I" etc. In Malay many words are "both noun and pronoun" (Winstedt 1927 : 53).

The Maori third singular personal pronoun *ia* (wrong explanation in previous editions) is from *dia, W. Bantu *ndi* (Johnston 1911 : 362), Malay *ia, dia*. It is based on the old Definite *li, di*, which once meant "head", "hand", "man" ("animal" in Mangbetu). The following *a* was once preceded by a consonant, possibly indicating the article *la* (or *ba* "preson"). The possessives *āna, ōna* "of him", "of her" incorporate PWS *na* "this", Malay *nya*. The nasals, as often in Niger-Congo, may be from prenasalisation, perpetuating an old nasal prefix.

The dual and plural equivalents *rāua, rātou* "they" are from PWS *la* > *ra* "this, he, she" + numerals *(r)ua* "two", *to(r)u* "three", with loss of *r*. Ancient Egyptian likewise once had dual forms of the personal pronouns (Gardiner 1957 : 39). So did the Khoisan (Bushman & Hottentot) languages (Greenberg 1963 : 69), indicated by suffixes, eg *–ra*.

Maori *ahau = au, awau, awahau* "I, me" are from PWS *kúá* = *kwa, "man, slave", PWN *KWAL* "captive" (compare Eng. "your humble servant"), with a prefix *a-*. The *w* represents the PWS/PWN labiovelar. The *h* may be for *k. For Maori *āku* or *ōku* "of me" compare Old Bantu (Johnston 1911 : 362) *ñgu* "my" [*gu* > *ku*]. The possessives *nāku, nōku* "mine" are

preceded by PWS *na* “give”. (Or PWS *na, nā* “I, me”). Maori shows the change stop + labial vowel in progress to a labiovelar, under different accentual conditions.

Maori *māua* “we two” (he & I), *mātou* “we” (they & I) incorporate PWS *má* “this”. The corresponding forms *tāua, tātou* “thou & I, you & I” probably are from PWS *tà* “possession”, *ta* “possess”. Vowels may be lengthened to show plurality, compare *wahine* (sg), *wāhine* (pl). For following *–ua, -tou* see below, numerals *rua* “two”, *toru* “three” (used also for “many”). “A few Chari-Nile languages distinguish exclusive forms from inclusive forms of the first person plural pronoun” (Goodman in NEB 1989, 22, 775). These include Lendu (Central Sudanic) Daju, Teso.

Old Bantu *gwe, hu, ho* “thou, thee, thy” (Johnston 1911) are behind Maori *koe* “thou” etc. The *h* may be lost giving *āu, ōu* (possessives) “of thee” etc. Dual *kōrua* “you two”, plural *koutou.*

For comparison we give the Malay personal pronouns :
First Person *aku, kita* (more common in pl.), *kami* (exclusive of persons addressed)
Second Person *ĕngkau, kamu*
Third Person *ia, dia*

Note : Malay *awak* “you, I, body, person” ; compare Maori *awahau* “I, me”. Nouns become demonstratives and personal pronouns. Tschi *à-kwá* “male, male slave” (grave prefix, acute root), Agni *a-kwa* “slave”, Ewe *wò* “he”, Minoan *wo* “man’, Fula *wor*be “men”. [*wo* > **kwa*].

In Malay, as in early Niger-Congo, these personal pronouns are both singular and plural, though “in a few cases one word may be preferred for the singular and another for the plural” (Winstedt 1927 : 107 etc). Malay does not have the Dual Number. In Malay elaborate status distinctions are made by the use of these and other personal pronouns and titles.

Many nouns have become largely limited to pronominal purposes, or are commoner as pronouns than in their original noun form (Winstedt p. 111). Often *orang* “man” is used as indefinite “any person” etc. Occurs in English *orangutan* lit. “man of the jungle”.

THE VERB

The Maori verb has no true inflections except for the passive (and verbal nouns, which use suffixes). The same verb form serves for all numbers and persons, as typically in Niger-Congo. The verb is specified by particles which usually precede it : *e, kua, i, ka,* but *ana* follows (usually with a preceding particle). The Maori verb indicates aspect, tense, mood by particles which can often be identified as Niger-Congo verbs : *na* "come", *kua* "have" etc.

The Maori use of particles is probably to be compared with the Niger-Congo use of serial verbs (Williamson in Bendor-Samuel ed. 1989 : 30f). Niger-Congo often expresses aspects, tenses, moods etc by using ancillary verbs. See Loprieno (1995 : 4.6) on distinctions of tense, aspect etc in Egyptian. A strict purist would not speak of mood, tense, aspect in early languages. Primitive cultures saw future and past as both the same, or not actual. So is the distinction one of tense or of mood ? Basque has no future verb forms. Likewise aspect (Aktionsart) is really ultimately a lexical category. Grasslands Bantu has timeless narrative verbs (Watters & Leroy in Bendor-Samuel eds. 1989 : 444) that are comparable to the Maori aspectual verbs without tense reference. Voice in the Malay verb is controversial (Winstedt).

CONTINUOUS (Past, Present, Future)

The Maori distant past may be expressed with *neha, nehe* from PWS *na* "to come" (W. 1927 : 260), used of the future (in Mande), but also of the past (in front of one, while the future was behind), even of the present in some languages. The Maori Continuous Narrative Past (Williams 1862/1960 : 36) uses *ana* immediately after the verb, with *e* before it. The same construction is used for Continuous Present and Continuous Future. This word *ana* has the Niger-Congo verbal augment *a-* (derived from *ya* "go"), often prefixed to pasts in Bantu languages. Early languages did not make a clear distinction between future and past (both "unreal"). Maori *ana* "when" is used only of future time. Compare the addition of *–nga* in Kongo (Stapleton 1903 : 137) to continuous present and past verbs with a preceding *a-*

augment. : *y-a-tonda-nga* “I was loving”. Here we have formal identity of Maori and Niger-Congo in a complex split construction. For “biposed” *ana* see Biggs (1969).

VERBAL AUGMENT

Bantu has the augment prefixed to a variety of tenses (mainly past), and also to timeless expressions. See Stapleton (1903) and Torrend (1891) for details. The Niger-Congo verb, like the Maori, normally emphasises aspect rather than time. The augment takes the forms both *a-* and *e-* (verbs *ya, ye* “come, go, etc”), which lose the semivowel in prefix position.

It is usually said that Western Niger-Congo does not have prefixes (apart from the Bantu augment) on the verb. Stapleton identifies NOUNS by prefixes, VERBS by suffixes. But Ijo (Nigeria) is deviant and has vowel-initial verbs. TogoR prefixes *i-* to infinitives. Traces of full verb prefixes survive sporadically in Bantu languages. In Malayo-Polynesian verb prefixes are well established and productive. Classifiers, from which noun prefixes developed, are found in Thai, Chinese, Malay etc. Greenberg classified Bantu as a subgroup of a subgroup (Benue-Congo). It seems surprising therefore that it has so many archaic features and preserves the original noun prefix system, together with vestiges of verb prefixes.

MAORI VOCALIC “AUGMENTS”

Maori has *ahu* “move”, *aki* “dash against”, *ake* “go” (< PWS *kia, ke* “go”), *ako* “split” (*ko* “digging implement, weapon of war”), *ānau* “wander” (< PWS *na* “come, foot”). With *e-* augment : *ehu* “disinter”, *eke* “embark, to land, rise”, *ene* “flatter, cajole” < PWS *na* “give”, *epa* “throw”, *eti* “shrink”. See Stapleton (1903 : 151) for a table with augmented verb forms. Classical Greek has the “temporal” augment on past forms of the verb, but also on timeless verbs (Homer). In other words it was not really a tense marker. [Apparent prefixes on *hoake, hoatu, hōmai* involve a serial verb *ho* “give” + “go” (*ake, atu, mai*). Compare *mā* + *ake, atu, mai,* with the same subset of motion verbs. N-C used such verb + verb combinations. English has “go jump in the lake”, a rare survival.]

INDEFINITES

Maori Past and Future Indefinites take particles *i* and *e* respectively before the verb. The latter of these is a type of augment (*ye* > *e*). The former may be the *i*-prefix (from Niger-Congo *yi* "to be") that precedes infinitives in Togo Remnant. The infinitive and past indefinite are closely related. It should be remembered that prefixes were once full words. This can be shown for Maori *inu* < PWS *nu* "drink" + *mi* "drink". The Present Indefinite takes *ka* before the verb in Maori, compare the prefixed *ko* in present indefinites in Bangi (Stapleton 1903 : 139). Elements *ka, ke, ko* appear equivalent. So we have matched both Continuous and Indefinite tenses from Bantu. See Gardiner (1957 : 218, §290) Egyptian opt. initial *i*-VERB).

PERFECT (Completed Action)

This is introduced by Maori *kua,* regardless of tense. PWS *kuà* "to have" (Westermann 1927 : 244) is the basis for the usage (Bantu *kua* "Hand anlegen", PWS *ka* "hand"). Westermann derived the labiovelars from sequences of stop + labial vowel. Thus *kua* < *kua.* Bangi perfects prefix *o* to the verb (Stapleton (1903 : 138), Lolo *yo* (140). As *(k)ua/wa* > *o* this is not surprising. The Maori Inchoative *kua* is from PWS *kua* "go" ("going to do") however.

PRESENT

This is is introduced by *kei, kei te* (motion verbs). PWS *kia* "to make" > *ke*. The *te* is an article (from an old demonstrative pronoun *da* > *ta* "one"). The Maori main verb here should be seen therefore historically as second member of a serial pair. The *–i* on *kei* is probably the verb "to be", *yi* > *i.* Compare English (dialect) "makes to go". Maori *whai* "to follow" also has *–i.*

IMPERATIVE

This may be expressed by the simple verb : *karanga* "call". If the verb has one or two syllables, or is negative, the particle *e* precedes. I identify this as from Niger-Congo *(y)e* "go". Compare the biblical "Go to" + Imperative for the origin of this construction, or English

"Come on" + Imperative. In other words it resembles the "Augment" = "come, go". As with noun constructions so too with verbs. Or *kia* "let" may precede the Imperative. This is from PWS *kia* "make" ("do"), which is often used in combinations (Westermann 1927 : 233). Thus a weak general verb > particle precedes a more specific verb : VERB (classifier) + VERB (classified). In other words both verbal and nominal constructions once followed the same pattern.

INFINITIVES

There is no special form of the verb. The verb is treated as a noun and can be preceded by any demonstrative word or a possessive, a preposition or transitive verb (Williams & Williams 1862/1965 : 37) : *he karanga, te karanga, kei te pupuri ahau* "I am holding". Niger-Congo tended to regard infinitives as nouns (with noun prefixes, articles etc).

PASSIVE

Maori passive voice forms involve adding various suffixes to the active (Williams & Williams 1923/1965 : 44f), as in Niger-Congo. Most of these Maori suffixes end in *–ia,* or *–na* (see Bauer 2003 : 476 – 477 for a list). In Niger-Congo *ia* < PWS *gia* (*ghwia) = *yi* "to be" + *ya* "to come" ("become") ; and the passive "preposition" *na* (Stapleton 1903 : 208), from PWS *nà* "to be" (Habitualform), also "to come", can explain these Maori forms. Compare Lolo *tuba* "to pierce", *tub-ia* "to be pierced" with Maori *kī* "say", *kī-ia* "be said". Stapleton (1903 : 210) mentions that "most of the [Congolese] languages" have a passive or stative in *–ia.* It is conceivable that these "passives" really once meant "become said", "become pierced" etc.

His treatment of Congolese passives in pages 207ff makes it clear that the range of suffixes varies greatly as it does in Maori. Williams & Williams (1923/1965 : 44 f) presents further parallels in derivative verbal forms from Maori that may be compared with the material given in Stapleton (1903 : 207 - 223).

Bauer (2003 : 483) mentions that the Maori passive is unusually frequent in narrative and suggests (on comparative Polynesian evidence from Samoan etc, see Lynch 1998 : 150) that it originally had an ergative function (2003 : 488, 533ff). Its use with adjectives and nouns etc is consistent with an original meaning "be", "become". All Mande verbs have problematic voice characteristics, suggestive of ergativity (Westermann 1927 : 181) : "transitiv und intransitiv verwendet"; or else that they are nouns. See Gardiner for the (likewise problematic) situation in Egyptian. Egyptian has an Old Perfective, which is narrative and "tends to have past meaning" (Gardiner 1957 : 245), is usually (not always) "passive" (page 244), and means "being (come etc)". It looks very like the Maori passive. See Gardiner's OBS. 1. on page 235, comparing Akkadian.

A real problem is to explain various other elements infixed before the passive ending, some of which (as Williams & Williams noticed) go with the stem (Tagalog *inum* "drink" suggests an analysis *inu-m-ia,* not as commonly *inu-mia*). See Bauer (2003 : 488), and compare PWS *ni, nu* "drink" (sometimes + nasal), PWS *mì, mìn* "drink" (sometimes reduplicated, or + nasal). Similarly *moto* "strike", *moto-k-ia* (Efik *tuk* "strike", Bantu *tunga* , Malinke *tugu*). Or *aru* "chase", *aru-m-ia,* from PWS *lu* "knee", Mossi *ru-m-di* 'knee", or *mau* "caught", *mau-r-ia* "be brought", PWS *mua* "catch", Guang *ma* "to catch", but Kussassi *mò-re* "to bring" (with *r*). These infixed resonants are common in N-C, and come from *ni, li* "be", "come". They have the effect of continuity or process. So RES. INFIX + *ia/na* = "be going" ("to come" etc). Proof is impossible with the available evidence. Our conclusion remains merely plausible.

NEUTER VERBS

Williams & Williams recognise a category of Neuter (defective) verbs, a type of participle or verbal adjective, with completive meaning (usually translated by English past participles) : *pā* "struck", *mau* "caught", *mutu* "cut short", *oti* "finished" : but also "adjectives" such as *ora* "well in health", (with inceptive meaning) "becoming well". They are constructed with *Ka...*, *E...*, + V + S ; negative *Kahore* + S + *e* + V + *ana* etc (W & W, rare). See Bauer (2003 :

491ff) for a detailed discussion, (she includes *haere*), giving various attempts at classification of subtypes. They may have active or passive meaning. That is they predate the distinction.

These Maori verbs are typically intransitive relics of an earlier, perhaps ergative (Subject = Patient/Agent) or nominal system. They resemble the "middles" (intransitive uses of transitive lexemes) which survive in the classical languages. They do not form a canonical passive, and rarely have a true negative. One is reminded of the verb in Mande languages, with its problematic lack of voice. Also of the Latin "passive" past participles : *cautus, peritus, potus, quietus, tacitus* etc. See Ernout & Thomas (1959 : 276 –277), regarding these Latin forms that are at once past and present, passive and active, perfect and non-perfect, verbs and adjectives. They may be detached entirely from their verb. Homeric Greek has few passives. In Egyptian the passive was likewise slow to develop. Historically it comes late upon the scene in many languages. A derivation from earlier nominalising morphology (suffixes) is probable for Niger-Congo also.

The Maori Neuter Verbs do participate in some formal processes however. They take factitive prefixes, nominalising suffixes, and (in limited circumstances) passive endings – which casts further doubt on whether the Maori passive is really a passive. They are not used as modifiers. This at least proves they are indeed to be regarded as verbs. Note that passive verbs in Maori may induce a passive suffix on a modifier (introduced by prepositional *–ā-*). Again evidence that the Maori passive was not originally a passive.

DERIVATIVE VERBAL NOUNS

Williams & Williams (page 44) note that nouns may be formed from verbs by adding certain suffixes : *–nga, -anga, -hanga, -kanga* etc (compare p. 50). Johnston (1911 : 362) says the suffix *–aha* or *–añga* "gives a sense of continuance to the verbal root" in Bantu. PWS *ka* "hand", "make" underlies these formations. Williams & Williams add that these suffixes "bear some relation to the passive termination" : *motu* "cut", *motu-kia* (passive), *motu-kanga*

(verbal noun), *tanu* "bury", *tanu-mia* (passive), *tanu-manga* (v. noun). I relate these formations to Stapleton's (1903 : 218) "Intensives", denoting that "the action is wrought...to a high or excessive degree". Exs from Ngala : *bandakana* "to be very quiet" (*banda*), *bondondolo* "to be very thin" (*ondo*). Perhaps the Maori passive belongs here, - among the verbal nouns.

"A few verbs preserve an ancient verbal suffix *–hi* or *–ki*" say Williams & Williams (page 44), and form the noun "direct from the verbal root" : *ruma-ki* "dip in water, bury, plant" + *ki*, "basket of seed potatoes", (compare PWS *lu, lua* "to plant" [M. *r* = PWS *l*]). Their other example is *ara-hi* "lead, escort" + *hi,* "path" (also *ara*). This *ki must be from PWS *ki(a)* "to make" (with *(a)* = article), Bantu *kita* "to do", (Khoisan : Hatsa *cikina* "to make").

Corresponding forms exist with the suffix *–hanga, -kanga* (PWS *ka* "hand", "action of hand"). These forms have the common N-C nasal infix *–n-* (*na, ni* "to be"). Congolese **ke, ko* "make", Kongo *koko* "arm". Hiechware C. (Khoisan) *ca khna* "make". The suffix *–ki* is not from PWS *ki* "small". The test case is *tiki* "make child" (*ti* "a shoot, child"). The *tiki* might be a very large image (= an ancestor). The little *hei tiki* worn by women however is like the fertility doll worn by African girls to induce pregnancy. It represented an embryo (big head with fontanelle). In East Africa it is worn round the neck; in the West, under the skirt.

COMPOUND VERBS (*whaka-*)

Maori has numerous compound verbs beginning with *whaka-*. Most of these are causatives. I derive these from PWN *BÁK* "build". See also PWS *búák* "arm", Efik *ubak*, Kissi *bōka* "arm". Maori *whākau* means "surround with a net". PWS *baka* means "basket". PWS *báli* "to bind" is also relevant. Maori *wh* = PWS *b*. Maori *waka* "canoe" may be related. The word *waka* also means "a long narrow receptacle". Confusion of *wh/w*. Often *a* > *ua* derivatives.

The Maori agentive prefix *kai-* on verbs (*kai-hanga* "maker") is from PWS *ka* "hand", hence "action (of hand)". Maori abilitative prefix *ma* "able to" must be connected with Maori *mahi* "to do, to work", PNC *mah* "build, mould, make" (Armstrong 1967), PWS *ma* "to finish".

NOTE : For the problem regarding the distinction between nouns and verbs in New Caledonia see Leenhardt (1946 : xxii), citing Codrington (1885), also page xxiv, under "LOCUTION VERBALE SUBSTANTIVE". Page xviii : "Ces langues donc sont loin d' être figées." Even the numerals may be verbs (page 38 – 39).

NOTE : In Mande (Niger-Congo) change of tense may be shown by "conjugating" the personal pronoun (Schlauch 1943 : 157, omitting pitch markings) :

ŋga wa	"I come"	*ŋgi wailo*	"I came"
ba wa	"you come" (sg)	*bi wailo*	"you came" (sg)
a wa	"he comes"	*i wailo*	"he came"
ma wa	"we come"	*mu wailo*	"we came"
wa wa	"you come"	*wu wailo*	"you came"
ta wa	"they come"	*ti wailo*	"they came"

It will be noticed that the present personal pronoun has the vowel *a,* the past the vowel *i* (compare Maori) or *u.* The pronoun subjects, unlike those of Maori, come before the verb. I consider that these "conjugated" pronouns have incorporated a tense marking particle, comparable to Maori *e, i.* As a serial (or auxilliary) verb it precedes the main verb "come".

In some Polynesian languages (eg Tahitian) the negative markers are coded for tense (Campbell 1991 : 1131). Eg. " '*aita* and '*aore* negate present or past tense, '*e'ita* and '*e'ore* negate the future". The apostrophe (glottal stop) comes from original **k.* Compare Mande *hēhē* "non" (non accentué), *ay, hay* "non". PWS *ka* "hand", *ka* "not", PWS *kì* "abstain".

PREPOSITIONAL PHRASES

The prepositional phrases are very like verb + noun object constructions. A preposition cannot stand before a subject noun. Prepositions are lexically transparent, unlike other preposed short particles or markers used to introduce noun and verb phrases. They are the point at which lexicon becomes grammar. This is why doubts arise as to whether particular forms are in fact prepositions, and borderline cases (between prepositions and conjunctions) occur. In certain respects Maori escapes the confines of traditional grammar and even of modern descriptivism. Both of these impose rigid categories. Maori is ambiguous, a language in process, which has developed from an agglutinative free order source, with mobile root elements. It would help to look at Maori and the Maori prepositions with African eyes.

The actual preposition stands first in its phrase, and may come historically from a verb or a noun. Prepositional phrases are based on the idea of space and movement. From this indications of time develop, then more abstract relations. Syntactically these expressions stand for all types of adverb. See Biggs (1969 : 54f) for a brief account. Also Bauer (2003 : 173f) for a fuller treatment. We give a few illustrative examples of this complex phenomenon.

POSSESSIVE

Maori has a dominant possessive *na* "of, by", also a subordinate (passive) possessive *no* "of". This is the PWS root *ná* "to give", used as a sign of the dative, Efik *no* (possibly also PWS *na* "upon"). The forms *ma* and *mo* indicate possession not yet realised (Biggs 1969: 57). Datives and possessives are very similar (Biggs 1969: 54). The short forms *a* and *o* "of" are comparable words with loss of the initial consonant. They may be from Niger-Congo (Bantu, Meeussen) *pá* "give", with initial consonant loss (fricative grade > #). In fact *pá* (= NC *ba* "hand, arm") may be original (plosive grade), Maori *pā* "touch, be connected with etc". Forms with *n/m* may be the nasal grade (from *ta* "hand"/*ba* "hand"), ie action of hand.

ALLATIVE

Maori *ki* "motion, towards, to", is cognate with PWS *kia* "to go", PWS *gi, gia* "to go", but lacks the final (added) vowel.

LOCATIVE

Maori *i* "at" is for PWS *mi* "in", or *ni* "in", with loss of the initial consonant. The Nupe form is *nimi* "in, inside". It must have been unaccented or proclitic. Derivation from *ni, nyi* more likely. Loss of the initial consonants causes uncertainty and vagueness of meaning. Hence the variety of functions of *i, e* in Maori.

MANNER PREPOSITION *–Ā-* "in the manner of" etc

Nouns other than personal or locative nouns, when not used as head of a phrase, may be attached to nouns by a preposition or particle *–ā-* (Harlow 2001 : 125). This prefix means "in the manner of", "by means of", "as a ...". Eg *waiata-ā-ringa* "action song", *tae-ā-wairua* "be spiritually present", *kite-ā-kanohi* "see face to face", *hui-ā-whānau* "meet as a family".

What is the historical source of this preposition ? We know that Bantu plural prefix *ba-* becomes the Maori Personal Article (Nominal particle) *a,* used before personal names, pronouns, local nouns, placenames etc functioning as Subject of a sentence. That is PWS *ba* > *wha* > Maori *a.* The conditions for the Manner Preposition *ā* however exclude personal and place nouns, and exclude Subject function. I consider therefore that this Manner Preposition derives from a verb. Possibilities include PNC (Greenberg 1963 : 159) *fa* "take", Soninke, Awuma, Anyimere, Twi *fa,* Guang *fo,* Degha *po* "take", Ngala *bo,* Kongo *bonga,* Bantu *pok* "take", PWS *pé, pó* "take away", with *b/p* > *wh/h* > *#.* (An alternative derivation from *na* "upon, top" (> *na, no, a, o*) is less likely). The long *ā* may be due to reduplication, or to addition of a second syllable *–ka* "hand" (Bantu *–k*). The etymological source is *bua, ba* "hand", used for "action of hand", ie "take". In Niger-Congo the word may mean "to rob, to steal". Alternatively from PWS *ba* "be in a place".

PREPOSITION *Ā* "belonging to"

Maori *ā* is a preposition meaning "of, belonging to" (used of transitive actions, works accomplished or in progress, movable property, instruments, food, husband, wife, slaves etc) as Williamson says. Niue also has *ā* "belonging to" (with persons). I derive this preposition from PWS *bua, ba* "hand". The hand often symbolises possession of property. There may be a connection between this and the preceding entry. Phonetics : [*baba > *wawa > *aa > ā].

PREPOSITION & CONJUNCTION

Maori *me, ma* "and, if, with" is sometimes described as a preposition. The Maori interplay between prepositions and conjunctions has parallels in Egyptian. Thus Loprieno (1995 : 100) mentions "licensing the use of prepositions to introduce verbal clauses" in Ancient Egyptian. He derives most Egyptian prepositions from decayed (caseless) nouns. The basis of these usages is spatial ("in", "through", "in front of", "behind", "within" etc).

TRANSITIVE PREPOSITIONS (Williams & Williams 1965 : 41)

"Every transitive verb in Maori is connected with its object...by...*i* or *ki*" (prepositions of place or movement). Santandrea (1061 : 45) refers to <<interchangeability of object between verb and preposition>> in Ndogo etc. Eg *Ye go ta 'dù* "I insulted (with = *ta*) man". This use of a preposition before the object reminds one of Maori. Compare also the Late Latin expressions such as *credere in deum,* with Preposition + Accusative case. Santandrea (1961) is very rewarding for Maori comparisons of all kinds. It was not available to me when this book was first written. The remarks on Particle + Verb are most relevant also.

For a fuller treatment of prepositions see Harlow (2001), Bauer (2003). Maori prepositions are extremely important , but perhaps best understood in terms of the lexicon.

SENTENCE & CLAUSE MARKERS

THE NEGATIVE

The Maori negative sentence begins with the element *kā* (*kāhore, kāo* "no", *kiāno, kāhore, anō* "not yet"), then comes the subject (inversion of VS to SV) , then *e* followed by the verb (Williams & Williams 1862/1945 : 34f). Compare PWS *ka* "not", Nupe *kà-mo* "not", PWS *ka* "hand". Originally the hand *ka* was held up to indicate "no". The negative imperative *kei* is probably also from PWS *ka* (see Biggs 1969: 92). PWS *na* means "not", Maori *nō* (in *nō hea*) is negative in force. Congolese languages (Stapleton 1903 : 164f) use combinations of *ke, ka, ko, o* etc before and after the verb. Maori *–ho-* is from *ko.* Congolese also uses *te* "not" = Maori *tē* "not", PWS *ta* "hand, not". Malay *bukan* "not"is prefixed. Malay *nafi* "negative" is suffixed. Maori *ehara* "not" < *ekara. Maori *–re* in some of these expressions is PWS *lè (re)* "to be (in)", used to make the Niger-Congo "Progressivform" (Westermann 1927 : 249).

WEAK IMPERATIVES

The use of Maori *me* to indicate weak imperatives must derive from PWS *mà* "not", also *me*. (see Biggs 1969: 61, on Maori). No negative form is available! Likewise the *me* used to introduce Maori Past Conditions (essentially negative), "If he were..." etc. One is reminded of Classical Greek *mē* + Clause here. Nilo-Saharan has *ma,* Songhai *maná* "not" (Bender in Heine & Nurse eds. 2000 : 63). This word is from the nasal grade of *m-ba* "hand".

INTERROGATIVES

In Maori postposed *nē* is added to a question, request or proposal. This must be the PWS negative *na,* Edo *ne.* Colloquial questions end in "no?" in some forms of English. Compare French "ne ce pas?". Nilo-Saharan *na* interrogative (Bender in Heine & Nurse eds. 2000 : 65). Latin uses *–ne* as a postposed sentence interrogative. Egyptian *n, nn* is "not". This is nasal grade of *n-ta* "hand".

Maori *wai* “who?” corresponds to Congolese *wai* “which?”, from PWS *ba* (Stapleton 1903 : 104). Egyptian *ptr* “who?, what?”. Maori *aha* “what?” (Malay *aka*) corresponds to Ngombe – *eka,* Lolo *nko,* Soko *hai.* Maori “why?” is *na te aha* (Lolo *na* “what?”), or *he aha* (with Maori article *he*). See Stapleton (1903: 102ff) for further information on Niger-Congo interrogatives. These Maori expressions all derive from PWS *ba* “man, person, he” (eg *pēhea,* compare Malay *betapa*), *ka* “speak”, “that”, *na* “this”, with various interrogative accentuations.

RELATIVES

Maori “relative pronouns” *nei, na, ra* are likewise based on Niger-Congo pronouns and demonstratives : PWS *ni* “this”, *na* “this”, *la* “he, this, that”. Neither Maori nor Niger-Congo has true relative pronouns. Niger-Congo may use *o* (Lolo & Ngala) as a general relative singular, with *ba* “they” for the plural. This *o* may be an original possessive (from PWS *kụà* “to have” > *ko, χo*), just as *o* is a possessive in Maori.

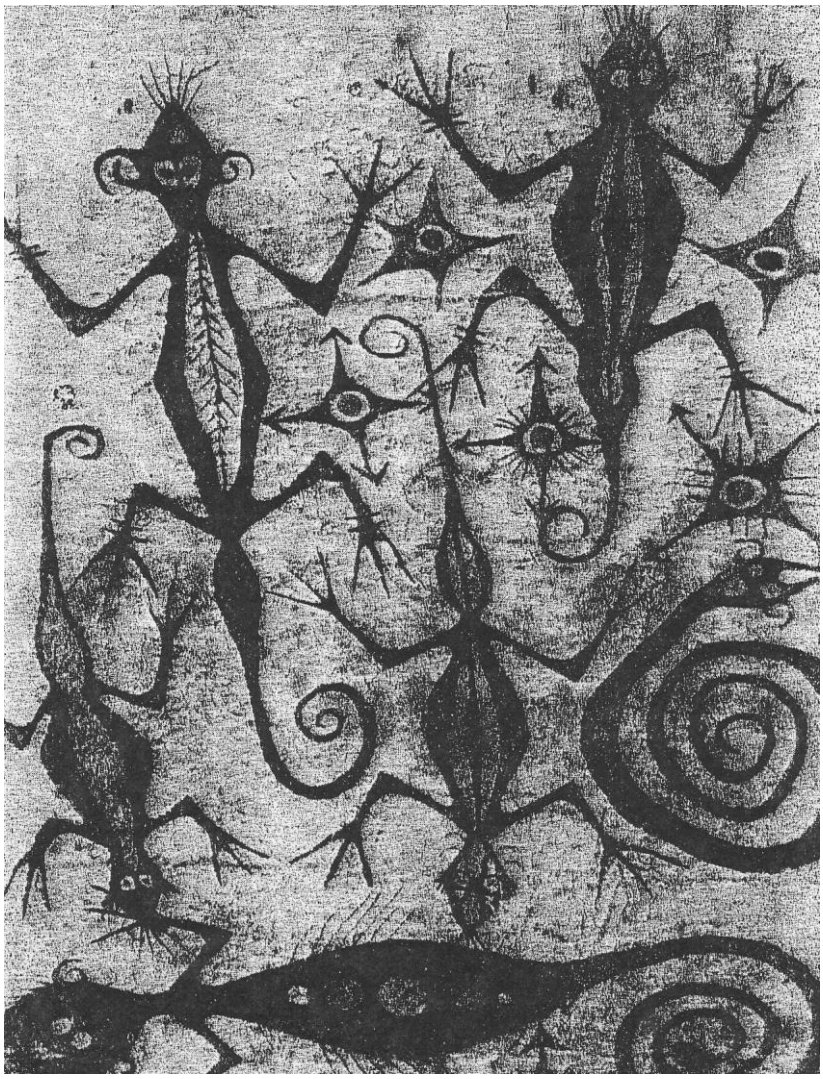
Maori *ai* is used in relative and some other clauses (Williams 1971, sub voc). Pratt (1911/1960 : 21), on Samoan, treats of Relative *ai* which “performs the function of a relative and always implies an antecedent”, or acts as a demonstrative. I derive this word from **nani,* Kongo *nani* “who”?, Swahili *nani* “who”?. Also used to mean “What”? PWS has *ni, na* “this, that”. Changes of intonation distinguish “that”, “who”?, “which” etc. Compare Bangi *wani* “where”? Consonants are lost in unaccented forms. In other words we have *ai* from more than one source in Maori.

THE POSITIVE

In Maori *āe* means “yes” (but “no” to affirm negatives). This must be equivalent to Swahili *aee* “yes”, Soko *heeye,* Bangi, Poto, Ngombe *e* “yes”. Problematic Maori *e* has various obscure meanings (See Williams’ Dictionary), which can often be explained from an original affirmative, eg E2 “why, of course”.

INTERJECTIONS

To be distinguished from *āe* is Maori *ai* (used of distress *tauriki*, surprise etc). Compare the Ewe *áì* used of bodily pain (Westermann 1930 : 112). It is interesting that many of the exclamations listed by Westermann for Ewe have the same force in Maori : Ewe *ehê* "surprise", Maori *ēhe* "surprise", Ewe *ko* "disapproval" Maori *ko* "address to girls" (but also used of men, disapprovingly?), Ewe *hoo* (*oo* = *ō*) "ridicule", Maori *hō* "pout" (derision).



Melanesian painted bark, from New Guinea (Amsterdam K. I.)

WORD ORDER

Maori word order (VSO) has parallels in Nilo-Saharan, Afro-Asiatic, Indo-European and Caucasian. The verb is the head of verbal sentences, and comes first (except in negative sentences). It is generally preceded by a particle, which is essentially a more general verb.

The noun head normally precedes its modifying adjectives, numerals etc. It may however be preceded by an article or determinative, which is really an historical classifier or class noun. Ancient Egyptian systematically places generic determinatives (nouns or verbs) after the hieroglyphic ideograms however (Gardiner 1957 : 31-33).

In Maori prepositional phrases the preposition is the head. Prepositions are mostly ancient verbs followed by an object (transitive objects in Maori are usually preceded by a preposition). All this probably indicates that Maori belongs to an early stratum of Nilo-Saharan = Niger-Saharan (as hypothesised by Gregersen, Bender, Blench etc).

SVO word order is harmonic with Prepositions, not Postpositions. VSO mainly cooccurs with prepositions. Malay has SVO, Tagalog has an initial verb (as has Malagasy of Madagascar). Both have prepositions. Malay was much influenced by Arabic and Sanskrit.

It is probable that the SVO seen in Malay and Benue-Congo languages has arisen from earlier VSO due to fronting of the Topic (Dey 2004 : 35). The Topic tends to be the same as the Subject, less often the same as the Object (whence SOV). The long and complicated evolution of word order in these languages is responsible for inconsistencies such as the preposed numeral identifiable in some Maori placenames.

NOTE : In placenames such as Aokautere (cloud + float), Arahura (path + discover), Aratoro (path + explore) the noun precedes the verbal element. The examples may represent SV or OV word order, but are better taken as Noun + Adjectival. The name Anawhakairo (cave + carve pattern), with following –whaka + iro (VO) confirms this analysis. The verb, being an old noun, can be adjectival.

PHONOLOGY

"Evidence of recurring regular sound correspondences is considered by some scholars to be the strongest evidence of remote genetic affinity" [Fodor, Guthrie].

L. CAMPBELL

"There are no rigorous procedures for determining how similar two items must be in sound and meaning to be considered evidence for genetic relationship, or how many items are needed..."

M. GOODMAN

Niger-Congo words are made by agglutination (attaching prefixes, suffixes, infixes) from a limited number of (mainly) monosyllabic PWS roots, of which about 400 are listed by Westermann (1927). Under these he gives examples from actual languages, which can be used as a comparative dictionary. He separates prefixes and suffixes from the root with a hyphen. In Die Sudansprachen (1911) Westermann had connected Western and Eastern Sudanic, again using monosyllabic roots. Although he uses an antiquated phonetic script, and wrote a century ago, Westermann is an "eminently cautious investigator" (Greenberg).

Mukarovsky has a more recent PWN list that excludes Mande from Niger-Congo. We also refer to lists of words given by Armstrong (1967) for W. Niger-Congo (including Fula), Stapleton (1903) for Congolese (Bantu), Johnston (1911, 1919-) for Old Bantu, Meeussen (1969/1980) for Proto-Bantu, Guthrie (1967) for Common Bantu, Greenberg (1966) for Adamawa-Eastern, Kordofanian, Khoisan etc. We have also consulted Stewart's (2002) list. Stewart's list has 109 items arranged to show (reconstructed) sound correspondences. Wherever possible we set up **sound correspondences on PWS roots.** The general aim is to match basic vocabulary with root words and establish African etymologies for Maori.

The validity of this procedure rests on the assumption that Maori can be broken down into monosyllables. That this is so is suggested by the fact that Maori polysyllabic words are made up of syllables which all occur in all positions of the word. The same sounds appear in initial, medial and final position. I infer that Maori, like Niger-Congo, ultimately came from a monosyllabic base language such as Central Sudanic (Nilo-Saharan). Lilias Homburger (1929) stated that the same elements occur "sometimes as prefixes, sometimes as suffixes, sometimes as infixes" in African languages. See also Homburger (1949).

Westermann recognises a limited set of consonants for early PWS, without lenis plosives, labiovelars, fricatives or semivowels. His earliest form of PWS has 3 **VOWELS** ***a, i, u***, like Afro-Asiatic. **CONSONANTS** ***k, p, t, g, l, b, (ŋ), n, m***. His root list extends this inventory.

We consider he went back deep into Nilo-Saharan. His work is the key to Maori, which also has a limited set of phonemes (derivable from Westermann's even more limited set). This primal set of sounds split and differentiated, leading also to differentiation of meaning.

Modern reconstructions of Proto-Western Nigritic (Mukarovsky 1976/77) and Proto-Volta-Congo (Stewart 1983) recognise the following consonants, which can plausibly be taken back to Proto-Niger-Congo (Williamson in Bendor-Samuel 1989 : 22).

MUKAROVSKY

	Labial	Alveolar	Palatal	Velar	Labiovelar
Fortis stops	p b	t d	c j	k g	kw gw
Lenis stops	ph bh	th l		kh gh	khw ghw
Nasals	m	n		ŋ	ŋm
Approximants	w		y		

STEWART

	Labial	Alveolar	Palatal	Velar	Labiovelar
Fortis stops	p b	t d	c j	k g	kp gb
Lenis stops	ph bh	th dh	jh	kh	khp ghb
[Nasals]	m	n	ny		ŋm
Approximant		l			
[Nasalised approximant]		l^n			

Stewart agrees with Westermann in not reconstructing any semivowels (y, w). But Mukarovsky's root list (pages XXIX to LII) has no W, and few examples of Y. These sounds seem to have come from labiovelars.

The question of Niger-Congo *l, *r, *d alternation is problematic, and complicated by retroflex *d. It has even been argued that there were no nasals in Proto-Niger-Congo. The palatals are rare, and best derived from the velars. It is thought that the lenis stops came from the fortis. And Westermann derives the labiovelars from combinations of velar stop + vowel *u.* So it is best to take Westermann's conservative sound list as a working basis, which can

always be expanded if necessary (eg by adding *d* etc). Reconstruction involves subsystems and levels of depth which cannot be pegged to an absolute chronology. Westermann goes very deep, but his depth involves loss of detail.

I do not accept Stewart's (2002) recent reconstruction of clicks (implosives) in PAB (Proto-Potou-Akanic-Bantu) in place of voiced lenis plosives. These sounds occur mainly in initial position, and are probably due to prefix reduction. For Proto-Bantu see Meeussen (1967), summarised by Hinnebusch in Bendor-Samuel (1989 : 462) : *p, t, k, c, b, d, g, j, m, n, ny, (ŋ).* He recognises doubled nasal consonants (due to reduced assimilated affixes) and prenasalised stops (with reduced nasal affixes). In the following paragraph Hinnebusch refers to Bantu spirantisation of oral consonants. All this looks very like Sapir's Atlantic consonant mutation, with three grades : I plosives, II fricatives, III nasalised plosives. Stewart (2002 : 204) sets up a similar situation for his Proto-Potou-Akanic-Bantu. Dempwolff had recognised consonant grades in PAN (Blust 1976 : 341ff, on palatals).

Compare Williamson in Bendor-Samuel ed. (1989 : 40, Table 15), suggesting labiovelars with weakened (semivocalic), nasalised, denasalised reflexes. There is disagreement among scholars about the number of Niger-Congo protonasals and their status. Stewart (2002 : 204, Table I) sets up a full range of nasal consonants for PAB, and includes nasalised labiovelars. This is perhaps where we should put Mukarovsky's semivowels etc : *Y, W = ny, nw.*

We will look for traces of these three mutation grades in Maori. In Maori grade III (nasal) is problematic, but some evidence for it survives. Eg Maori *nui* "big" may be from PWS *kuì* "big", with prenasalistion. The root *ku* "big" is used for "man, male". So *nu* "man" may be an old nasal grade of *ku.* The same may be said of PNC *nu* "bird", which is probably from *ku* ("bird cry) ; Ibo has *nnunu* "bird" (Greenberg), Nimbari *nun(gu)* "bird", Gbaya *nwê* "bird" may have once had a velar. The Maoris connected birds with men : *manu* "bird", but also "leader, chief". A prehistoric bird totem is a possibility. The *hei tiki* may be a bird embryo.

Malay has *manuk* “bird”, *manus* “smell of dead bodies”, *manusia* “human being” (compare Manu “the First Man” in India), Maori has *manu* ‘bird”, *manumea* “sacred bird”, but *manukura* “chief”, *manu a Tiki* “man”, *manuwhiri* “visitors”. (For *whiri* compare Ndogo, Sere, Tagbu *wiri* “guest”). Niger-Congo has : Boritsu *ma-nyi* “person”, Avatime *ba-ni-ma* “persons”. Maori *pī* means “young bird”, also “young fighting men”. Birds represented ancestral souls in Africa. For “bird-men” in Maori rock drawings see Orbell (1996 : 11); for souls speaking through birds Orbell (1996 : 45).

Maori *iaia* = *uaua* “sinews, veins” might be compared with PWS *gi* “sinew, vein”, which has prenasalised reflexes in Songhai and Tobote, not to mention reflexes *dž, dj* suggestive of a labiovelar. One wonders whether PWS *ná* “give” is from *n + *ta “hand”, or *na* “not” from *n + *ta “hand”. PWS *ní* “cow” may be from PWS *li, di* “cow” with prenasalisation. We know PWS *(m)-bu* “bug” > Ewe *mú* (Maori *mū* “insects”, *mūmū* “large green beetle”). Is PWS *mua* “catch” from *m + *bua “hand” ? PWS *muì* “bee” has cognates with Nasal Prefix + *ni* in Sudanic, but Bantu *júki* (Meeussen), Urbantu *nuki, ɣuki* (Meinhof) “bee”. Maori *ki* “to, into, in, on” should perhaps be connected with PWS *mi, ni* “in”, PWS *ti* “middle” (*kiti, titi*), Urbantu *kati* “inside”. Maori has *kati* “block up, close in”. PWS *ni, nà* “mother” recalls PWS *kì* “woman”, “small”, and Old Bantu *ka* “wife”, *ka-* “small prefix”.

The whole question of consonant mutation with three grades raises a host of questions. Grade I is primary. There is some evidence (from Fula etc) that Grade II involves lost prefixes. In Maori Grade II (Fricative) may go to zero (“dead consonants”). Stewart’s objections to dubious intermediate reconstructed stages remain valid however. If one works gradually upward by reconstructing lower stages errors may creep in at any stage – even if the stage (common period) is genuine. Stewart’s PAB is a reasonable compromise. Bantu undoubtedly provides evidence for a very early phase. Hendershot & Shellabear (1945 : 13f) give examples, I think, of nasal grades and consonant loss in Malay (prefixes *měm-* or *pěm-* : *buka, měmbuka, putus, měmutus,* with *p*-loss etc).

The probable vowels of Proto-Niger-Congo are *a, (e), i, (o), u,* with ATR vowel harmony in Kwa etc (Stewart). ATR means "advanced tongue root", ie EXPANDED. But *e* & *o* are historically secondary, at least in most cases where evidence is available.

Plain	a	e	i	o	u
ATR	a+	e+	i+	o+	u+

We do not intend to posit nasalised vowels, which are treated by Stewart as original. Stewart recognises, but does not give phonemic status to the nasal consonants. We regard nasalised vowels as due to a lost nasal consonant. We also suspect that expanded vowels (*r*-coloured) are due to loss of *r.* These fugitive resonants are probably due to infix reduction. A prerhotacised grade is also a possibility (*ra* "stream" > *r-ya* "go"), but better explained as *n-ghw> r* (prenasalised).

I think Stewart (2002) is unduly optimistic about reconstructing phonetic exotica, such as secondary vowels, over a time span of 5000 – 6000 years. I do not believe primitive languages were phonetically very different from the languages that exist today. See Jakobson in Troubetskoy (1949 : 367 - 379) for the distinction between primary (structurally prior) and secondary sounds. There is much to be said for Westermann's primitive three-vowel system, which matches that of Proto-Afro-Asiatic :

A = a, ā, I = i, ī, U = u, ū.

Meeussen reconstructed 7 vowels for Proto-Bantu. Stewart once thought Proto-Bantu lacked *ə, e, o* (Williamson in Bendor-Samuel ed. 1989 : 23). But see Stewart (2002 : 208) for 7 first position vowels (plain & nasalised) in PAB. No doubt three vowel timbres were original here too. Guthrie (1967) reconstructed long vowels for Proto-Bantu. Watters & Leroy in Bendor-Samuel (1989 : 439) mention that "contrastive long vowels are common" in Southern

Bantoid. I consider reconstructed vowels have proliferated in Niger-Congo. See Watters in Bendor-Samuel ed. (1989 : 414) regarding the innovation of unusual vowels. In PWS vowels *e* and *o* are usually demonstrably from *ia* and *ua* respectively. Neither Westermann (1927) nor others reconstruct diphthongs. In fact the CVCV structure of the Proto-language excluded them. Probably about 6000 BC there were 3 vowel tambers, with long and short varieties.

There is still argument as to whether PNC "stem words" were disyllabic or monosyllabic. But most disyllables can be plausibly broken down into monosyllables. Stewart (2002 : 205) gives the PAB root as CV(CV). Watters & Leroy in Bendor-Samuel (1989 : 441) : "Southern Bantoid morphemes commonly have the shape CV(C)(V), with CV and CVC being the most common". Mukarovsky (1977) reconstructs mainly monosyllables (CV, CVC) for Proto-West Nigritic, but also some disyllables. Johnston (1919 – 21) gives *ka* "woman", but also *kazi*, *kat.i* "woman". Westermann (1927) almost invariably sets up PWS monosyllables, alongside Meinhof's Bantu disyllables. Proto-Austronesian is regarded as primarily disyllabic (Pawley). We posit CV structures for c 6000 BC, but CVCV = Prefix + Root for c 3000 BC.

Hinnebusch, citing Carter (1973), argues for an original Bantu pitch accent (high & low). But many Bantu languages are stressed. I consider PNC exhibited both pitch and stress. Possibly pitch developed as a way of disambiguating monosyllables. A few Austronesian languages have a pitch accent (eg in New Caledonia). But most have stress. Tagalog has stress, but vestiges of pitch.

For Maori the accepted phoneme set is as follows :

CONSONANTS

	Labial	**Dental**	**Velar**
Stops	p	t (often + s)	k
"Aspirate" (laryngeal)			h
Flap		r (resembles *l*, formerly written as *d*)	
Nasals	m	n	ŋ (spelt *ng*, dialect *n*, *k*)
Voiceless semivowel	wh (or treated as a fricative *f, h, w* etc)		
Voiced semivowel	w (some interchange of w & wh).		

Hawaian has *k* for Maori *t,* Hawaian *kāne,* Maori *tāne* "male" (Both in Vai). Compare Pratt (1893 : 1) on Samoan pronunciations of *t* as *k.* Compare N-C Twi, Tschi, Chwee. Maori *kai rākau* "armed men" recalls *e tai* (address, as *e kai*). Is this the old T/K opposition ?

VOWELS

Vowels	a	e	i	o	u
Long vowels	ā	ē	ī	ō	ū

DIPHTHONGS : See Biggs (1969 : 131 – 132), also Harlow (2001), Williams & Williams (1862/1965 : 10, no real diphthongs). Pawley (page 761) says Proto-Polynesian added a contrast between long and short vowels which did not exist in Austronesian or Proto-Oceanic.

The nature of the Maori diphthongs and vowel sequences suggests they are relatively recent, coming from earlier VCV. We are therefore looking to find missing original consonants in these sequences. Retroflex *R* was lost between Proto-Oceanic and Proto-Polynesian (Pawley in NEB 1989 : 761), and looks a likely candidate to have gone missing between vowels. *D* may also be relevant (Pawley pages 755, 759). The precise phonetic value of *R* and *D* is uncertain.

Maori has a word stress accent and a phrase stress accent. See Harlow (2001) for the details. The syntactic unit of Maori is the phrase. Compare Malay, which tends (with a few exceptions) to lightly stress the first syllable of disyllables, or the penult of longer words. Samoan stresses the penult, but places stress on the final syllable if it has a long vowel (Pratt 1893 : 2). We assume loss of the "ultima" here. Compare Italian *città* < Latin *civitá(tem).* Tagalog retains traces of pitch under certain conditions. Pitch is important in New Caledonia and Papua New Guinea however (Lynch 1998 : 82).

In some ways the orthodox version of Maori sounds looks too good to be true. Beattie (1994 : 36) says that in the South Island, at least, "B, D, F, G, L and V" should also be included. This would bring Maori into line with other Malayo-Polynesian languages, and also bring it closer to Niger-Congo real language phonetics (as against reconstructions). These additional sounds may have been allophones however. [Compare Little Akaloa with Akaroa.]

Stapleton (1903 : pages *n* and 2) comments on the difficulties involved in recording languages where the pronunciation of vowels and consonants is in a state of flux, and the boundaries between adjacent sounds are not clearly defined. Boyd on Adamawa (1974 : 100) mentions fluctuation between some cases of *e* and *i,* also *o* and *u.* It must be remembered that languages spoken in a tribal context, without the benefit of writing, are less phonetically stable than our modern languages which have been standardised by printing. Pratt (1893 : 1-2) draws attention to Samoan *l/r/d,* and similar phenomena (*ʻ/k*), especially in loanwords.

Pawley in NEB (1989, 22 : 759) discusses the differences between Proto-Austronesian and Proto-Oceanic (the source of Maori). These differences distinguish Western Austronesian from Eastern Austronesian (Oceanic) as first defined by Dempwolff. Final consonant loss, simplification of initial and medial consonants, and retention of Proto-Austronesian *a, i, u* (within a five-vowel Oceanic system) are characteristic. He derives Proto-Oceanic *e* and *o* from *ay* and *aw* (PWS has *e & o* from *ia & ua* !). His Table 4 shows Proto-Oceanic devoicing of voiced *b* and *g,* but not *d.* Maori lacks the phoneme /*d*/. Niger-Congo languages had a

tendency to devoice voiced plosives. This is most noticable with *b/p,* but also occurs with *d/t* and *g/k.* Maori *r* is sometimes written as *d* in early texts. Pratt (1911/1960 : 2) mentions allophones of Samoan *l* that resemble "a soft *r,* almost approaching a *d* sound". One is reminded of Niger-Congo *l/r/d* alternation.

Lynch (1998 : 78) mentions that some Polynesian Outliers (Polynesian languages outside Polynesia proper) distinguish *r* and *l,* show a set of aspirated stops, and even have voiced stops and prenasalised stops. This is what we would expect if these languages are related to Niger-Congo. Micronesian and Melanesian languages (Lynch 1998 : 79 – 80) distinguish even more consonants (fricatives and retroflex stops for example). Typologically we get closer to Niger-Congo phonetics the further north and west we go.

"Some prefixes lost their prefix quality and were assimilated as nonproductive elements into the word base, and some affixes normally appended to a word became reinterpreted as free-form particles", adds Pawley (page 759). We have seen these processes at work in our analysis of the Maori "Articles" and related matters. In a Niger-Congo (and Nilo-Saharan) context however some reinterpretation may be required here.

The Proto-Austronesian vowels (Pawley in NEB 1989, 22 : 755, 758) *a, i,(e), u,* should be compared with Westermann's early PWS 3-vowel system *a, i, u*. "Final consonant loss" may in fact go back to a period before final consonants in words such as Tagalog *mano-k* "bird" (Maori *manu*), or *Arawa-k* (compare Sarawak in Indonesia, but also Maori *Arawa,* a canoe, a tribe) were attached (suffixed). The "free-form" particles may be original, and may go back to a monosyllabic base language such as we see in Central Sudanic (Nilo-Saharan). Pawley's Table 53 could be rewritten with only 3 vowels, *a, i, u,* in the Proto-Austronesian column, if a few reconstructions were revised. The question of when the Maoris left Africa is relevant here. Stewart (2002 : 202) has a conservative tentative chronology of Niger-Congo going back to 5000 BP. The question of where this fits into Nilo-Saharan needs to be raised.

We return to Pawley's Table 53, comparing Proto-Austronesian, Tagalog, Malay, Fijian, Samoan. Take his *enem "six", Samoan etc *ono*. Now "hand", "five" in Niger-Congo has the forms *ni, (ne), nu, (no)* with prefixes *ku-,(ko)-,(he)-,* which suggests *ku-nu/ni "big hand" (= "six"), + suffixes *–m, -mo = -ma* "finish". Who is to say that the *–m* of Tagalog and Malay once existed in Maori? Any more than that the *la* of Tagalog *dalawa* "two" (with vowel harmony) should be in the Proto-Austronesian reconstruction, given as *Duwa ?

Likewise Proto-Austronesian for "four", *e(m)pat raises the question of why Oceanic not only lacks the prefix **e(m)-,* but also the suffix *–t.* The Atlantic languages Konyagi and Wolof both have prefixed/infixed *–m-* on *ba* "arm, hand etc", thus Konyagi *fu-m-bak* "finger", Wolof *m-bage* "shoulder", compare Mossi *baɣa-do* "shoulder". The preceding *e-* of Malay (Tagalog *a-*) derives from Guang *ge-ba,* Beri *ke-ba.* Efik has *bat* "to count", with rare final *–t,* as in Tagalog *apat,* Malay *empat.* Probably from PWS *ta* "hand", "count". The long vowel *ā* of Oceanic languages suggests *a + a* (*ba-ta* ?) here, ie syllable loss.

The important question of whether valid whole word reconstructions can be made for a protolanguage which employed optional prefixes, optional suffixes, and optional (monosyllabic) infixes, in forms of the same word has to be raised here. Not to mention the disturbing influence of vowel harmony, which creates cognates with divergent vocalism : *dalawa* (vowel harmony) = **Duwa, dua, rua* ; *empat = *e(m)pat = apat* ; *anim = *enem = enam = ono* (vowel harmony). And "Bantu" concord played havoc with the consonants.

Under these circumstances "whole word" reconstructions become impossible. They can only be made where daughter languages (eg Bantu, Polynesian) derive from a single dialect. If we wish to go deeper, the principle of "head counts" also has to be abandoned. Infixation and prefix reduction mean that one (or two) crucial reflexes alone may preserve the original sounds of a monosyllable from the protolanguage. Westermann's cautious method of setting up alternative monosyllabic roots may be as good a solution as any. It is instructive to look at

the words for “woman” in Niger-Congo : PWS *kì*, Old Bantu *ka*, Bantu *kadi*, PWN *KHÁ, KHÁND, KÍE, JALI,* (PWN *GWO* “fem. genitals”, PAB *gwã, “life”, PAB *gwɛ “fem. genitals”), but PCS *ko* “woman”. Maori has *kō* “girl” (voc), *hine* “girl”(voc), but *wahine* “woman”. PWS *guá* “gate” is the probable source of most of these. But PWN *GHI, GHIM* “live” is also apparently relevant. Not to mention PWS *nà* “mother” (Tobote *m-na* “mother”, but Bowili *m-má* ‘my mother”. Bantu has *nina* “his, her mother’, but *maamá* “my mother”).

Orthodox opinion has phonetic erosion taking place in Maori, Samoan, Fijian as the Oceanic languages moved eastward. Thus on page 761 Pawley mentions the loss of prenasals (our Niger-Congo nasal grade ?) on Proto-Polynesian stops (*nt* > *t* etc), loss of retroflex *R*, loss of final consonants, reduction of consonant clusters. He regards two-syllable word bases as typical, but also mentions longer and shorter (monosyllabic prebasic) words. Some of these features may be original however.

The time depth, and range of variation arising from what was once a monosyllabic base with free word order, vowel harmony and consonant mutation, means that flexibility and caution are necessary. We do not need to propose (with some African scholars) that African languages require a new form of comparative linguistics, much less suggest the abandonment of the comparative method (questioned by Heine in L’expansion bantoue, 1980 : 303). Like Newmann (1995), we think however the method has acquired too much baggage from old textbooks built on rigid assumptions about research. See Stewart (2002 : 198f) on misconceptions about the comparative method.

I believe a return to a root-based approach is needed. And perhaps a realisation that reconstruction of remote protolanguages can only be partial and tentative; rather like deducing the form of a building from post-holes. Möhlig is sceptical of ever reconstructing proto-Bantu (Watters in Bendor-Samuel 1989 : 411). It has been said that 8000 BC is the limit, and that it is impossible to go back further. Certainly one eventually reaches a level of

abstraction where all significant detail is lost. For Niger-Congo & Nilo-Saharan see Blench in Fifth Nilo-Saharan Linguistics Colloquium (1992/1995 : ps. 83-130), with chronology p. 98.

Walsh & Biggs list their reconstructed phonemes for Proto-Polynesian (PPN) on page vi : PPN *p, *t, *k, *? (glottal stop, not in Maori), *f, *w, *s (> Maori *h*), *h (not in Maori), *m, *n, *ŋ, *l, *r (both *l and *r = Maori *r*); (Maori *r* often matches Niger-Congo *d*). The glottal stop is most common at the beginning of words with an initial vowel, where it stands for a lost Niger-Congo prefix. It might in theory be used as evidence for Stewart's protoimplosives. Walsh & Biggs use the symbol *L* where they are uncertain whether to reconstruct *r or *l. Elbert (1964) uses *D = r, l,* but *R* where PMP has a sound lost in PPN. In my opinion this *R* often reflects an old velar (Niger-Congo *k*, or *n-ghw* > *r* in Sonrai = Songhai etc). Elbert has *Z* where Malay has *j* in *jalan* "road" = Maori *ara* (Bantu *y*). His *q* is a glottal stop.

PPN *i, *e, *u (= *i, e, u*); *a > *a* (sometimes > /e/), *o > *o* (sometimes > /u/). Walsh & Biggs use capital vowels where the original quantity is unclear.

In what follows we will raise the question of whether these PPN reconstructions can be sustained in the light of Niger-Congo (and Nilo-Saharan) comparisons. Deep comparisons may turn out to have serious implications for the comparative method, and for methods of reconstruction in general. We tentatively set up the following sound correspondences, for which evidence is given in the section on vocabulary.

Sometimes the facts are difficult to interpret. Thus *wā* [iv] "indefinite pronoun" (sg & pl), "so-and-so" might be from PWS *ba* [*b > w(h)*], or from PWS *kúá* "person", and may = *ūa* "particle", used in expostulation ("sir" ?), also may = *a* "particle", used before personal names & pronouns. Likewise *ā* conj,."extension in space or time", *wā* "space or time", *ua* "when" may be from PWS *guà* "much". So can we set up *KW, GW = *w* (and a # grade) ?

SOUND CORRESPONDENCES

***P = P**	***P = H**	***P = #**		
***T = T**	***T = (S)**	***T = #**		
***K = K**	***K = H**	***K = #**		
***B = P**	***B = H**	***B = #**	***B = WH**	***B = W**
***D = T**	***D = R**	***D = #**		
***G = K**	***G = H**	***#**		
***KW = W**		***KW = #**		
***GW = W**		***GW = #**		
***GHW = W**		***GHW = #**		
***GHWY = I/Y**		***GHWY = #**		
***L = R**		***L = #**		
***R = R**		***R = #**		
***M = M**		***M = #**		
***N = N**		***N = #**		

A few prenasalisations occur.

***(n)K = NG(ŋ)**

***(n)G = NG(ŋ)**

***(n)T = N**

***(m)P = M**

***(m)B = M**

Grade I is plosive, grade II is lenis, with a tendency to generate fricatives, grade III is prenasal, and tends to produce nasals and semivowels (sometimes *r*). In a few cases the consonant is weakened and lost completely. An example : *b* (plosive), *wh = f, h* (fricative), *mb > m* (nasal), *b > #* (zero grade). Nasals *m, n* should perhaps be included. We omit Meeussen's Bantu double nasal series (= prenasalised nasals ?).

PNC

	a	**e**	**i**	**o**	**u**
>	**o,e**		**e**		**o**

MAORI

	a	**e**	**i**	**o**	**u**
>	**o,e**		**e**		**o**

These give Maori *a, e, i, o, u,* but also *a > o, a > e, i > e, u > o.* All these vowel changes are frequent in Niger-Congo languages. Also common in Niger-Congo are the changes :
ia > e, ua > o, which also occur in Maori.

PNC

	IA (> E)	**UA (> O)**

MAORI

	E	**O**

The combination *nyi, yi* is reduced to Maori *i.* A lenis labiovelar may lie behind this combination. Similarly *wu* is reduced to *u.* Consequently Maori does not have the syllables *yi,* and *wu.*

EXAMPLES **"Nur das Beispiel führt zum Licht".**

We give some examples to illustrate phoneme grades (consonant and vowel mutation). These are living disproof of the assertion by the Junggrammatiker that "sound changes are regular and operate without exception". Grades are alternative developments of the same sound. In Niger-Congo consonant mutation is particularly characteristic of the Atlantic languages. Vowel mutation (*a* > *a, e, o*) is common in all Niger-Congo languages.

Phonological mutation of consonants and vowels is often accompanied by mutation of meaning, that is a slight but perceptible change of the meaning of the base grade. Compare *api* "oven", but *ahi* "fire"; or *toru* "three", *torutoru* "few", *oru* "thick", *oruoru* "few", *oruoru* "rough broken water", *ouou* "few" (Rarotongan *toru* "three", but *ou* "payment", *ouou* "silly", *aouou* "a simpleton" [with noun prefix]); *reo* "language", *korero* "speech", *karere* "messenger", *karakia* "incantation", *karanga* "call", *rā, rarā* "make a continued dull sound". These examples illustrate plosive and fricative grades, consonant loss of *t* and *r,* and vowel mutation : *a* > *e, a* > *o, aa* > *ā.* Prefixes and suffixes occur on some of these words.

NOTE : Consonant grades occur in Indo-European in Celtic languages. One is also reminded of the phenomenon of Sandhi in Sanskrit studied by WS Allen. Sandhi is a junction phenomenon. Basque also shows consonant grades. Agglutination is the cause.

NOTE : Vowel quality may fluctuate in word final position. Thus *make* "throw" = *maka, mohe* "soft", *mohi* "sleek", *pata* "drip", *patī* "splash", *ruhi* "exhausted", *ruha* "weary", *tahē* "calabash", *tahā* "calabash", *tāhuna, tāhune* "pappus of *raupō* seed", *kame* "eat", *kamu* "eat", *kara, kare* "form of address". This might be interpreted as diminished force of articulation at the end of a word. In which case it relates to the loss of final consonants and the glottal stop. Vowels carry less information in final position. But the phenomenon is far from pervasive, and does not approach a rule.

VOCABULARY

The original concepts found in Niger-Congo words were few, concrete and essential to early man and his world. The comparative list below shows this. Stapleton (1903 : 254) mentions the "paucity of terms" and "poverty of meaning" (lack of abstract words) underlying Congolese vocabulary. He notes the lack of adjectives, lack of colour words (both supplied by other parts of speech), and tendency to use verbs for adverbs and prepositions. All these comments might equally be applied to Maori.

On the other hand "Each of the Congo languages has a very full vocabulary within its range", 72 words for "palm tree" (Bentley) for example. Many important words can be related to human body parts. Thus PWS *ta, ka* mean "hand", but also "give", "take" etc (actions of hand), not to mention "not" (hand held up) and "speak", "count" (use of hands for gestures). The same root *ta* is found in "stone", "spear" (thrown by the hand) etc. But there is a limit to how far one can take this argument. It is nevertheless suggestive, and may cast light on the remote origins of language.

Pawley in NEB (1989, 22, 755) comments that "in both Western Austronesian and Oceanic languages, many words seem to have persisted in almost unchanged form, a condition unparallelled in the Indo-European languages for example". In theory this would indicate a greater time depth for Indo-European, and an earlier departure from Africa. Alternatively, changes in civilisation may have been more rapid in the European area. We have also noticed that the coexistence of alternative forms of the same word (doublets) is pervasive in Maori. It is almost as if we are dealing with several different dialects at once.

Dates based on analysis of Lapita pottery (thermoluminescence) suggest a Pre-Polynesian departure from the Bismark Archipelago c. 2000 BC. Bellwood (1987 : 27) considers that linguistic and archaeological evidence indicates the Austronesians "began their expansion

about 5,000 years ago from the general region of Taiwan into the Philippines and Indonesia", and possibly came previously from southern China. More recently Bellwood (1995) has suggested a migration from the Asian mainland about 5000 BC (Lynch 1998 : 53 & 322).

See Stewart's (2002) schema on page 202), giving 3000 BC for Proto-ABCDE (Niger-Congo). I regard Stewart as conservative in his estimate of the time involved. But there are archaeological reasons for putting our hypothetical "Proto-Niger-Congo" in a 6000 – 3000 BC time frame. See Grimaldi Forum, Bassani cur. (2005 : 51, Nok sites) for a Proto-Bantu date of 4580 – 4290 BC. This would accord with a migration out of Africa 6000 – 4000 BC, to Taiwan, leading into a colonisation of the Pacific c 2000 BC by Lapita people. Previous dispersals and previous languages do not concern us here. Sailing ships were invented c 3000 BC or earlier, around the Persian Gulf (Blaiklock 1976, I : 410).

The outrigger appears to have originated in eastern India (Madras). Tamil *kat.t.amam* "catamaran", Tagalog *katig* "outrigger", Rarotongan *katea* "large double canoe", *kati* "to fasten", West Futunan *kiatu* "outrigger boom" (Lynch 1998 : 209), PMP *katiR "outrigger boom". The Micronesians perfected the outrigger canoe. These inventions were a precondition of Pacific colonisation. The Niger-Congo peoples were associated with the spread of agriculture and, we think, with the development of ships. The Iban or Sea Dayaks of Borneo are connected by name with the Niger-Congo Ibara, Ibeno, Ibo. See now Howe ed. (2006) for a full account of Polynesian navigation.

The list of words which follows was taken initially from the extended Swadesh list, but is not confined to it. There may be several items corresponding to one in Swadesh, or no word which exactly represents his item. Our Niger-Congo roots do not suit the Swadesh word based method. This means that following the (disputed) statistical treatment proposed by Swadesh is problematic. Some regard Swadesh as applicable only to shallow historical data.

A sample of Maori vocabulary follows below. The existence of multiple word matchings on single concepts between Maori and Niger-Congo in our data is particularly significant. Thus the synonyms for "child" and "fire" each are represented by a range of parallel lexemes in both Niger-Congo and in Maori. This could not occur by chance.

NIGER-CONGO	**N-S**	**MAORI**
bi "child"		*pī* "young fighting men"
wana "child" (Kele), *GWHYAN*	Vekens *ngwe* "infant"	*wana* "young shoot"
kúán "life", "sound" (*GHW, ku >w*)		*wana* "well grown, fine" (Compare *wānanga*).
pú(a) "embryo", *pu* "belly"		*kōhungahunga* "infant"
-tani "man" (Togo R)		*tāne* "man" (*tamaiti* "child", *tamahine* "girl", *kōtiro* "girl" [*tiro* "desire"]).

The Maori word *tamaiti* means "child". PPN *tama "child" also means "father" in Samoan, Tongan, Fijian etc. PWS *tá* means "father". Maori *tamaiti* is from the same root with the addition of *iti* "small" (plural *tamariki*). The *–ma-* may be from PWS *má* "people, tribe" (or PWS *muan* > *ma* "child, beget").

pi "fire"	Vekens *ébi* "to grill"	*ahi* "fire" < *abi*
tá "fire"		*tahu* "light fire"
kà "(lit) charcoal"	Vekens *eka* "to light"	*kā* "on fire"
ná "fire"		*ina* "warm oneself"
		RAR *'ina'ina* "to singe"
		Leenhardt *ne* "fire"
kiri-wi "coals" (Ndogo, Sere)		*kirihau* "ritual oven"

Similarly a range of Maori words for "water", "liquid", *ma-, ra > rere, tō, ū, wai,* can be matched on Niger-Congo. Leenhardt *we* "water". See also on "axe", "woman" etc.

ALL Maori *katoa* “all”, PPN *kAtoa “all”, Malay *segala, sekalgan* “all”, Tagalog *taganás* “all”, PWS *gán* “big, chief”, PWS *ka* “chief” etc. Maori *toa* means “warriors”, (“chickens” ?), (or “war”, PWS *ta,* + article *a*). So “chiefs and warriors” ? It is at least possible that *kato-a* should be compared with the East African tribal name Gato.

***K = K, *A = A** ***T = T, *A = O**

AND Maori *ma, me, ā, hoki* “and”, PPN *me?a “thing”, Malay *dan, dengan* “and”, Tagalog *saka* “and”, PWS *ká, kán* “say, and**”**, PWS *ma-* “plural prefix”. Congolese *nga* “and ”, Bantu *na* “and, with”. The *mā* used with numerals (*tekau mā rua* etc) must mean “add”, PNC *ma* “make, build” (also “beget”). Compare the idea of “generating” numbers (or adding them like bricks to a building). Maori *maha* “many” may be relevant.

***M = M, *A = A/E** ***K = H, *A = O** ***K = #, *A = A** **or *D = #, *A = A**

ANIMAL Maori *kararehe* “animal”, Malay *haiwan* “animal”, Tagalog *háyop* “animal”, PWS *ka, (kan/r)* “animal”, Animere *ka* “beast”, Ahlo *i-kà* “beast, flesh”, IV Bamana*, kā-ra* “animal, flesh”, Takponin *ka-ra* “flesh” [*r = l*]. Maori *–rehe,* Fula *le*dd*e* “bush” ?

***K = K, *A = A** ***R = R, *A = A**

ARMY, TROOP Maori *taua* is related to PWS *ta* “war”, Ekoi *bita* “war”, IV Bamana *ta-wu* “war” (+ old article *–a*), PWN *THÁ* “war” (connected with *ta* “hit, shoot”). The associated Maori *ope* “troop” is from Bantu *pi* “army”, PWS *pi* “die”, PWN *PI* “beat”, Soko, Kele *bita* “war” etc.

***T = T, *A = A** ***P = P, *I = I**

ASHES Maori *pungarehu* “ashes”, PPN *puŋa “mould”, Maori *punga* “tree fungus”, Malay *abu* “ashes”, Tagalog *abo* “ashes”, Sua, Mel (Atlantic) *i-bun, bulen* “ashes”. Nilo-Saharan *bu(r)* “dust, ashes”. Vekens has *pu* “ash” N-S.

B = P, U = U **(*B = H, *U = U) ?**

AT Maori *kai, kei, ki, ko, a* "at", Malay *akan* "at", Tagalog *sa* "at", PWS *kà* "remain", PWS *ka, kia, kan* "side", (+ *ni* "in"?). PPN *ki "towards", PWS *kia* "to walk", PWS *kí* "to remain".
***K = K, *A = A** ***K = K, *I = I** ***K = #, *A = A**

ATTACK Maori *tau* "attack", *taua* "hostile expedition, army", Tagalog *atake* "an attack', PWS *ta* "war", Newole *ta-gu* "war fetish", Barga *ta-wu* "war", Gurma *bu-ta-bu* "warrior", Bantu *táa* "war", Poto *eta,* Soko, Kele *bita,* Kongo, Swahili *vita* "war". Maori *pitau* "war canoe" belongs here.
***T = T, *A = A**

AXE (iron) Maori *piau* "axe", Malay *kapak* "axe", Tagalog *palakól* "axe", PWS *pía* "axe" . TogoR has forms with following *p, w*. Bantu *PÀND* "to split", Bantu *band* "to split", *pac* "to split", Ngombe *epondo* "axe", Kongo *basa* "to split", Swahili *pasua* "to split". Togo Remnant (Heine) has *ka-fía "axe".
***P = P, *IA = IA**

AXE (stone) Maori *toki* "axe", PPN *toki "axe, adze", Bantu (Meeussen) *tand* "cut", PWS *tè, (ta)* "cut" + *ki* "make"? Ngala, Poto, Kele *ata* "split", Bangi *yatola* "split", Lolo *itoko* "split", Ngala *litoko* "split". Bantu *coka* "axe", Swahili *shoka* "adze", Poto *ikoko* "axe".
***T = T, *A = O**

AXE Maori *matau* "hook", Fijian *matau* "axe", Samoan *matau* "axe", PPN *matau "axe", PWS *mua* "to catch", Guang (dial.) *ma* "to catch", PWN *MUA* "knife, razor". The Maori –*ta*- is probably the Niger-Congo word for "hand, cut", Compare *toki* above.
***M = M, *A = A** **+T = T, *A = A**

AXE Maori *heke* "felling axe" (*heke* "descend"), PPN *seke "descend, pull down", Malay *kapak* "axe", PWS *ká* "cut", Guang *káká* "to cut in pieces", Bangi *kete,* Swahili *kata* "cut", Bantu *coka* "axe", *ceng, kek, kat* "cut", PWN *KWÈK, CET, KET, KHANT* "cut"., Malay *ketek* "little", Bangi *ke,* Poto *keke,* Soko *hekeheke* "little" (of cutting into little bits). The various cognates illustrate vowel and consonant grades. Ultimately these words are from PWS *ka* "hand" (cutting = action of hand), PWN *KA, KYA, KWÁN, GWAL* "hand" (with palatalised, labialised and voiced variants).
***K = H, *A/E = E** ***K = K, *A/E = E**

BACK Maori *muri* “back”, PPN *mu?a “before (space, time)”, PWS *ma* “back”, Guang (d.) *ga-mal* ? Bantu *kunyima* “behind”, Bantu *(ny) uma* “back”, Bantu *YÌMÀ* “back”. PWS *mu, muan* “to bear, to bear child” (children were carried on the back), Gurma *mále* “to bear”, PWS *mu, mua* “to clutch, to sieze”. The future was thought of as “behind”, the past as “in front”.

***M = M, *A = A**

BACKBONE Maori *ua* “backbone” is also from PWS *kúá* “bone” (Westermann has earlier *kûpa,* as in Guthrie’s Bantu, Akpafu *i-kúi* “bone”, Lefana *kúbi* “bone”). PWN *MUA, UMA* “back”, Bantu *(ny) uma* “back” (Meeussen). A Maori phonological doublet. Also *wheua* “bone”, which has the element *bi* > *whe* preceding. (Maori has *mua* “front”). I suggest a nasal grade *m-kupa should be set up here. Compare Maori *ā* “collarbone”, PPN *ā “jawbone”.

***K = #, *U = U** ***B = #, *A = A** ***B = WH, *I = E**

BAD Maori *kino* “bad”, Maori *whiro* “evil”, Malay *busuk, buruk* “bad”, Tagalog *bulók* “bad”, PPN *fiLo “first night of moon”, PPN *kino “evil”, PWS *kì* “abstain” (religious) ? + PWS *na* “not”? PWS *bi* “bad”, Kandjaga *bi-anga* “wrong”, Bantu *bú* “bad”.

***K = K, *I = I** ***N = N, *A = O ?** ***B = WH, *I = I**

BAG Maori *kete* “basket”, “belly of a net”, PPN *kete “bag, basket”, Fijian *kete* “belly”. PWS *kètèkú* “bag, sack” (*ku* “big”). In Westermann’s groups I, III, IV, VI.

***K = K, *E = E** ***T = T, *E = E**

BECAUSE Maori *na, no, mā,mo, ta te mea* “because”, PWS *na, ma, ta* all meaning “not” ? The same words are used as demonstratives > relatives however. Compare Latin *quod, quia* “because” (from dem./rel *kw).

***N = N, *A = A/O** ***M = M, A = A/O/E** ***T = T, *A = A**

BEGET Maori *ai* "to beget", Maori *aitanga* "progeny", (compare *Ngāti* in tribal names, eg before *āti* "offspring" etc, so Williams). The word *ai* is associated with *āti,* and is connected with PWS *tí* "tree", Maori *tia* "peg, drive in pegs", *tiaka* "parent", *tiki* "image" etc. I posit an old word *ati "beget" > *ai* with loss of *t.* Trees were regarded as ancestors.

***T = #, *I = I** [Greek *tiktō* "I beget"].

BELLY Maori *kōpu* "belly", *Kōpūriki* "Little stomach" (placename), *puku, manawa* "belly", *poho* "belly" (= *puku*). PPN *kōpū "belly", PPN *puku protruberance", PPN *manawa "belly", (Maori *manawa* "belly, heart, breath, mind"), PAB *pu "stomach", PWS *ku* "stomach", PWS *pu* "stomach". Maori *tia* "stomach, navel, mother", PWN *TEMB* "stomach", *TEB* "carry". Igbo has *a-fuo, a-huo* "belly", PWN *PÚT* "belly". Bantu *bumu.*

***K = K/H, *U = U/O** ***P = P, *U = U** ***T = T, *IA = E** ***B = #, *U = U**

BIG Maori *nui* "big", *rahi* "large", PPN *nui "big", PPN *lasi "numerous", Rarotongan *ra?i* "numerous", Tagalog *malakí, mahalagá,* "big", PWS *kuì* "big", Igbo *o-kpì* "big", (*n-kui*), PWS *la, (da)* "old, grown big". PWS *gán* "big", Ewe *ame-gá* "chief, elder", Ga *gágá* "long, high".

***(n)K = N, *UI = UI** ***L = R, *A = A**

BIRD Maori *manu* "bird", PMP *manuk "bird", PPN *manu "animal, bird", PNC *nu* "bird", PWN *NÙNI, GWÙN, GWYÙN* "bird", Thai *nok* (See also Greenberg 1963: 14, 5). Bantu *(j)uni* "bird", Bantu *YÒNÌ* "bird", Kongo *nuni* "bird", Soko, Kele *noli* "bird". Prefix *ma-* (pl.) PWN has *KUKI* "fowl", Proto-Mande **kuni* "bird" (Dwyer in Bendor-Samuel 1989 : 55), compare *ku* "parrot", *kuku* "dove" etc, with original *ku* (prenasalised to *nu* ?). Or compare PWS *nu, ni* "mouth". Maori *te manu pirau a tiki* "corpse", Fijian has *manu manu* "animal", compare Malay *manusia* "human being" (Skt.), *manus* " smell of cemetary", *manuk* "bird". Manu is the first man in India. Men and birds were often equated.

***N = N, *U = U**

BITE Maori *ngau, kakai* "bite", PPN *kai "food, eat", Malay *makanan* "to bite", Tagalog *kagát* "to bite",PWS *ká* "bite", Tschi *ka* "to bite", PWN *KET, KEKET* "to bite", Bantu *COM* "to bite".

***K = K, *A = A** **(n)K = NG, *A = A**

BLIND, STUPID Maori *pohe, matapō, kāpō* "blind", PPN *poko "extinguish". The word *pohe, popohe, pōhea* also means "dull, stupid". Malay *buta* "blind", Tagalog *bulág* "blind", PWS *bobo* "to be dumb", Guang *bobo* "to be thoughtless", Boko *bebe-ka* "to be dumb". The form *popo-he* formally matches Niger-Congo both in the reduplication and in the suffix (Boko *bebe-ka*). Bantu *poku* "blind". We also have an original Niger-Congo vowel *o* which is quite rare. PWN *PUM, PUP* "blind", PWN *PUO, PIO* "blind" have the earlier *U.*

***B = P, *O = O**

BLOOD Maori *toto* "blood", PPN *toto "blood", Swahili *damu* "blood", Swahili *mu-toto* "child" [*d = t*], (compare Songhai *dje, ze* "child" < "blood"). [Malay *darah,* Indonesian *d.aɣah,* Li *da:t* "blood", Fijian *drā* "blood"]. Afro-Asiatic **dam* "blood" (Hayward in Heine & Nurse 2000 : 94).

***T = T, *O = O** **(*D = T, *A = O)**

BLOW (v) Maori *pupuhi* "blow", PPN *pusi "blow", Maori *puhi* "wind", Malay *pukulan* "blow" PWN *PHUK, PHUD* "to blow", PWS *pú* "to blow", Ngombe *pupea* "to blow", Swahili *vukuta* "blow".

***P = P, *U = U** ***K = H**

BLOW Maori *moto, momoto, motomoto* "strike with the fist", *moto* "blow with the fist", PPN *moto "strike", Malay *tolak, mĕnolak* "to repel", PWS *tù* "to knock, to strike", PWN *TÚ* "to pound", Bantu *tuut* "to beat", Mangbetu *otu* "to pierce with a lance". The *mo* may be from prenasalised PWS *búá* "arm, hand".

***T = T, *U = O**

BONE Maori *iwi, kōiwi* ; also *iwi* "people", Moriori *imi*, EAS *ibi* "bone", Tongan *hui*, PPN *h(i,u)wi "bone". Hatsa (Khoisan) *akwibi* "young ones" [*bi* = "young, small"] ? Kongo *visi* "bone", Adamawa (Boyd 1974 : 85, mundaŋ) *wīŋ* "bone", Lolo *wese* "bone", Soko *lihwe* "bone", Old Bantu *bisi* "bone" (See Johnston 1919-: 30, with Note 1: *f* = *k*, *v* = *g*). Maori *hiwi* "descent". Prefixes confirm this etymology. Prefixes *ke-, o-, e-, u-, i-, di-, du-, do-* in Sudanic . The meaning "bone" may have been influenced by PWS *kú, kùá, kùí, (ki)* "kill". [*ua* > *o*]. PWS *kúá* "bone", Bantu *kúpa* "bone" > *kō-*. See Lefana *kúbi*, Likpe *di-kúbi* "bone". Also see Bangi *lokwa* "bone", Poto, Ngombe *mokua* "bone", Ngala *monkua* "bone", Kele *ikwa* "bone". [*kua* > *ko*]. Tagalog has *butó* "bone". Vekens *kwo* "bone" N-S.

***B = WH/W, *I = I** ***K = K, *UA = O**

BREAK Maori *wāhi, wāwāhi* "break", PPN *wahe "divide", PWS *guà* "break, cut in pieces", Tschi *gwa* "cut in pieces", PWN *GWÁ* "split". PWS *gi* "to cut".

***GW = W, *A = A** ***G = H, *I = I ?**

BREAST Maori *uma, ū, poho* "breast", Malay *susu* "milk, breast", Tagalog *suso* "breast", (PPN) *sū "liquid", PWS *má, (uma)* "mother", PWS *mu, muan* "to bear", Ibo *mua,* Kasele, Gbari, Nupe, Idoma *ma* "bear a child". PWN *MUA, UMA* "back", PWN *BAMB* "carry child on back", Bantu *uma* "back", Koke *ba* "child", PWS *bí* "child", Guang *ke-bíà* "child", PWS *bí, (-vie)* "female breast", PWN *BÍL, BÍD* "breast", V Limba *hu-bi* "breast", Bantu *–vele* female breast". Kordofanian : Masakin *(ŋ)ome,* Katla *omu* "child". Khoisan language : Sandawe *haba* "beget", Hiechware Naron (C) *aba* "beget". Mothers carried children on the back. All these words are connected and have similar prefixes. By consonant mutation *b* > *w* ("fricative" grade), *b* > *m* (nasal grade). Grebo *mwane* "to bring forth a child", Gbari *ma* "to beget".

***M = M, *A = A** ***B = P, *A = O** ***M = #, *U = U**

BURN Maori *kā, ngiha,* (*kanaku* "fire"), Malay *luka, bakar* "burn, burnt", PPN *[ka] kaha "burn", PWS *kà, kàn, kàl* "charcoal or lighted charcoal", Nupe *e-ka* "charcoal", VI Bamana *ka-mi* "lighted charcoal". PWN *KHÁL* "charcoal". N-C often has a prefix *i-, nin-, na-*. PWS *na* "fire". [Greek *kaio*]. Maori *ina* "to warm oneself", Rarotongan *'ina'ina* "to roast".

***K = K, *A = A** ***K = H, *A = A** ***N = N, *A = A**

CANOE Maori *waka* "canoe", "narrow receptacle", "medium for an *atua*", PPN *waka "canoe", Longando (Tuerlings) *waka* "to die", Adamawa-Eastern language: Waka. Boats of the dead (used by Maori) are relevant here. Maori *wakawaka* "bed in plantation". The etymology is probably from **buaka* "arm" or **bua* "hole". Body part more likely. [*bu* > *w*].

W = W, A = A **K = K, A = A** **(*BU = W)**

CAUGHT Maori *mau* "caught", PPN *ma?u "fixed", Tongan, East Uvean *ma?u* "to hold", PWS *ma* "finish, kill", PWS *mua,* (*ma*), "to catch" [*ua* > *au* ?]. An old Maori "Neuter Verb" (Williams & Williams page 48 – 49). Compare Maori *mahiti* "spent", *mahue* "left behind". Perhaps from prenasalised *bua, ba* "hand". Vekens *âbo* "to take" N-S.

***M = M, *A = A**

CHEAT Maori *pepe* "attract birds by imitating their cry", "use leaf for same purpose", *pere* "riddle": PWS *bèl,* Grebo *bede* "to cheat".

***B = P, *E = E**

CHILD Maori *tamaiti, kōhungahunga* "infant", Maori *tama* "male child", *tamariki* "children", PPN *tama "child" (Fijian *tama* "father", Samoan *tamā* "father", Tikopian, Tongan *tamai* "father"). PWS *tá* "father", PWN *TÁ, TATA* "father". The *–ma* < **mba* "bear child", *-iti* < NC *ti* "small". *Kōhungahunga* "young vegetation", PWS *pu* "appear" > *hu,* Mossi *puka,* "open", Dagomba *pu-γe* "to sprout". The word is prefixed (*kō-*) as a noun in N-C, and often has a following suffix . The *–nga* = a postposed plural article/classifier. The Maoris regarded trees as ancestors. In Africa ancestors came back as children. Ngaitahu has *aki* "boy", Raro. *akire* "captive, pet pig" (to cook), Mangbetu *oki* "to roast", Holoholo *ki,'* "to die" ; but Bangi etc *ke* "small", PWS *kì* "woman" (*ki* sometimes of boys). Maori *kōtiro* "girl" (See *kō* "girl", voc.), PCS *ko(N) "woman" (fem. genital, "gate"), *tamahine* "girl" (*hine*).

T = T, *A = A ***M = M, *A = A** ***P = H, *U = U** ***K = K/H, *I = I**

CHILD Maori *pī* "young bird or young warrior", PPN *pī "young bird", PWS *bí, (bibi)* child" (*bi* "bear children"). Two words "bird" & "child" perhaps conflated. PWN *BÍ* "child", *BIBI* "bird of prey" (reduplicated). The Maoris regarded birds as ancestors. "Fighting cocks" are also relevant here.

***B = P, *I = I**

CHILD Maori *wana* "young shoot", PWS *kúán* "life**"** (both words also mean "sound, healthy"; in Niger-Congo *wana* is used for the "child king"). PWN *GHWYAN* "child". Malay *anak* "child", *a.laki-laki* "son" may be related. Tagalog and Toba-Batak (Dempwolff 1934:47) have *'anak* "child". The glottal stop *'* and Maori *w* are distinct reflexes of the N-C labiovelar. This sets Maori apart from Tagalog. Malay *kanak-kanak* "infant" (prefixed). Māori *wānanga* "occult arts" is used for "university", also means "instructor", *tohunga.*

***KW = W, *A = A (*GHW = W, *A = A) *N = N**

CHOP Maori *tōtō* "chip, knock off, chop", Maori *tope* "cut off", PPN *tope "cut off", PWS *tua* > *to* "to hit, strike, knock". Compare PWS *tè* (+ nasal) "cut", PNC *ta, *te "cut", Bwamu *ta* "cut", Bantu *tand* "cut", PPN *matau "axe", Samoan, Fijian *matau.* Tschi *te-w* "to rend", with *–w.* [English *mattock* ?].

***T = T, UA = O**

CLAW Maori *matikuku, maikuku* [*t* > *#*] "claw", (PPN) *maikuku "claw", Fijian *kuku* "fingernail, toenail", Malay *kuku* "claw", Tagalog *kukó* "claw", PWS *kú* "kill", Ewe *kú* "death", *kùkú* "dying", Grebo *ku tū* "dead body", Nupe *e-kú* "carcass". PWN *KU* "kill". PWS *ma* "finish", "kill", PWN *MAL* "finish, be finished", Bantu *mad* "finish", Swahili *ukucha* "claw". PWS *ti* "to take" ?

***K = K, *U = U *M = M, *A = A [*T = T, *T = #]**

CLOTHING Maori *kākahu, kaka, puweru:* PPN *kaka "fibre around base of coconut leaf", Malay *pakaian* "clothing" PWS *bù* "to cover", PWN *BU* "wear" (clothes), PWS *g̲á* "put on clothes", Guang, Igbo *wa* "put on clothes". So PNC *ghwa "clothe". Kongo *vwata* "be clothed", Bangi *swa,* Kele *wata* "be clothed". Root PWN *BA* "put", from "hand".

***B = P, *U = U** ***G = K, *A = A** ***GHW = W, *A = E**

CLOUD Maori *kapua* "cloud", PWS *pù* "white" (with prefix *ka-* and postposed article *–a*).

***P = P, *U = U** [Malay *pucat* "white", reversed ?]

COLD Maori *makariri* "cold", PPN *LILI "wrap up securely", PPN *mata "raw", *mātao* "cold", Bantu *DÌDÌ* "shivering with cold", Bantu *tadad* "be cold". Malay *dingin* "cold".

***D = R, *I = I** ***T = T, *A = A**

COME Maori *haere mai* "come here", *kai* "arrive", PPN *sA?ele "go", Rarotongan *?aere* "go". Malay *datang* "come", Malay *jadi* "come", Tagalog *halá na* "come on", PWS *kia* (= nasal) "to go", (*g̲ia* "to go"), with PWS *má* "this, there" (+ transitiver *-i* ?). PWN *GWÌA* "go", Bantu *gi* "go", *k(a)* "go", Bangi, Poto, Ngombe *ke* "go", Lolo *kenda,* Kongo *kwenda* "go". Some Niger-Congo forms have *s,* eg Efik *sanga* "to walk" (with *–na* "go"). Niger-Congo often has *ya* "go". Compare Fijian *ia* "go", Maori *ia* "current", Rarotongan *īā* "to put to flight", Fijian *lako yani* "go". See following entry.

***B = H, *A = A** ***M = M, *A = A** **(yi = I) "be"**

COME Maori *nau* "come, go", PWS *ná* "come". Such double matches of synonyms are very significant. Possibly a nasal grade of **la "go", as in East Sudanic (Greenberg) Merarit *la,* Tama, Dinka, Masai *lo* "go". PPN *laka "go", Maori *raka* "go". Or from PWS *na* "this, here". Tagalog *halá na* "come on". Fijian *–na* "waylay". Maori *ānau* " to wander" is related.

***N = N, *A = A**

COOK Maori *tao, tahu, whakamaoa,* (*maoa* "cooked"), *kōhue, tunu* "to roast", Maori *hū* "boil", *huki* "roast on a spit", *koropupū,* "boil", Maori *hunuhunu,* "to grill", *tunutunu* "to grill", Maori *korohū,* "to steam", *puia* "hot spring": PPN *tafu "cook", PPN *ta?o "cook in earth oven", PPN *maoa "cooked", PPN *tunu "cook", PWS *tùà, (tò)* "to roast", Bantu *tumb* "to roast", Bantu *pupum* "boil over, *pud* "boil up", Kongo *yoka* "roast", Swahili *oka* "roast", Lolo *kanga* "roast", Soko *loha* "roast". For *maoa* "cooked" compare PWS *mua* "sweet", Maori *maene* "pleasant". Note also that Maori *maha* means "steam". Possible nasal grade of *ta* > *ma.*

***T = T, *A = A** ***K = K, *A = A** ***T = T, *U = U** ***P = H, *U = U**

COUNT Maori *(ta)tau* "count", Maori *taki* "rod", "recite", Maori *tao* "spear", PPN *taku "recite, mention", PWS *ta, (sa)* "hand", PWS *ta* "arrow", PWS *tá* "to tell, enumerate", PWS *ta, tali* "stone", PWN *THÁLA, THÁLI* "stone", Bantu *tad* "reckon", *tali* "stone", *tonga* "stick". Compare Maori *tohunga* "expert" (with *ta* > *to*). Hands, sticks, stones were used for counting. The *t* may be lenis *TH,* but gives Maori *t* here. PPN *tā "strike, chop" (with hand etc). Tagalog *isama* "to count" (*ta* > *sa*), Igbo *i-ta* "story".

***T = T, *A = A**

CROWD Maori *popō, pō,* "to crowd around, throng"; Maori *hui* "assemble", PPN *fuhi "assemble", PWS *po* "person", PWN *BUL* "be numerous", Bantu *bung* "collect", Poto, Ngombe *buka* "collect". Original PNC *O preserved in Maori.

***P = P, *O = O** ***B = H, *U = U**

CRUEL Maori *whakawiriwiri* "cruel", *wiri* "to tremble, shiver", Malay *gigil* "shiver", PWS *gil* "cold", Senufo *wiri* "cold", PWN *GHWÍLI* "hair". The *whaka-* means "make".

***GHW = W, *I = I** ***L = R, *I = I**

CUT (v) Maori *(ko)koti, hahae, tapahi, tope:* PPN *[ko]koti "cut", PPN *tā "cut, strike", PWS *ká* "to cut, wound", PWN *KET, KHANT* "cut", *KWÈK* "cut", *TEM* "cut down", Khoisan: Hatsa *//ka:ta* "cut open", !O !Kung *//ka?a* "cut open", Masarawa (S) *//ka?a* "cut open", PWS *tè* "cut" (< ta "hand"). PWS *KA, KWÀN* "hand", PWS *búá, (ba)* "hand". Hands are used to cut. A clear link with Khoisan here. For the lenis variant see Maori *hahae* (from *ka, kha*), and (PPN) *sele "knife, cut", Tongan *hele* (not in Maori or Rarotongan).

***K = K, *A = O** ***T = T, **A = O** ***K = H, *A = A** ***B = P, *A = A**

DANCE (v) Maori *haka, kanikani* "to dance", PPN *saka "dance", Rarotongan *?aka* "dance", PWS *kán* "to speak" (singing and dancing), Temne *kane* "to tell", Gola *ó-kân* "word, speech", Edo *ka,* also *χa* "to say". PWN *KAN* "deny", PWS *nú,* Yoruba *nì* "to say" .
But *ha-ka* < **ka-ka,* > *ka* "speak", "chant", "sing". Rarotongan suggests an earlier velar for Maori *h.* Bantu *gamb* "to speak". Compare Maori *kapa* "line", PPN *kapa "dance" (*pa* > *ba*).

***K = K, *A = A** ***K = H, *A = A** ***N = N, *(I) = I**

DAWN Maori *ata* "early morning", PPN *ata "dawn", EAS, EFU, SAM, TIK, TON, TUA *ata* "dawn". (PPN) *ata "shadow, reflection" is related. PWS *tá* "fire". The initial *a* is an old Niger-Congo prefix as in Edo *e-ta* (*e* < *a*).

***T = T, *A = A**

DAWN Maori *pūao, ao* "dawn" (see following), *pua* "flower", *pua* "hold up head or heart of enemy", Malay *buah* "fruit", PWS *pu* "to rise" (of sun), *pu* "plantation", PWN *BUN* "harvest", Bantu *bungu* "type of fruit", Mangbetu *buda* "type of fruit". The word *awatea* "broad daylight" is from *ao* + *atea* (Williams 1971).

***B = P, *U = U** ***R = #, *A = A ?**

DAY Maori *rā* "sun, day", *rara* "dry by fire", *rangi* "sky, heavens, weather, day, air", *awatea* "broad daylight", *ao* "day, sky etc", *ata* "dawn", PPN *la?A "sun", Marquesan *?a* "sun", PPN *laŋi "sky", Fijian *lagi* "sky", Marquesan *?aki* "rain", PPN *ata "dawn", Malay *hari* "day", Tagalog *araw* "day", PMP *qa(ny)jaw "day", PWS *la* "day", usually *d.a* "day". PWS *gi* "Luftraum" (PNC *ghwi). PWS *kià* "to dawn, become clear", PWN *GHWÍN* "sun", *KI, KÌA* "to dawn", *JEL* "to shine", PWS *gui, guia* "sun", Bantu *júba* "sun". Maori *r* > prefix (*n, d* etc) + *ghw. Maori *ao* has lost the initial consonant (retroflex *d.* ?). But Maori *ata* < PWS *ta* "fire". PPN *maLiko "dawn, twilight, phantom" has *L < *ghw. Bantu *dé* "sky".

***D = R, *A = A** ***D = #, *A = A** ***(n)G = NG, *I = I** ***T = T, *A = A**

DIE Maori *mate, hemo* "die", PMP *matey "die", PPN *mate "die", PWS *ma* "to end", Indonesian *matay* "die" (Benedict connects "eye"), Malay *mati* "die", Tagalog *kamatayam* "death", PWS *tá* (+ nasal) "to end", PWS *ká* "to wound", Bantu *kata, kanda* "cut". The following nasals may have caused *a* > *e*. Maori *hemo* has a prefix (*ki-*).

***M = M, *A = A** ***M = M, *A = O** ***T = T, *A = E** ***K = H, *A = E**

DIG Maori *kari, keri, ngaki* "dig", PMP * kali "dig", PPN *keli "dig", PWS *li* "to dig", PAB *di "to bury", PWS *ka* "hand". "Hoe" is Maori *kō* ("hand" ?) as in Yoruba *ko* "dig" from *ku*, PWS *ka* "hand" (> *n-ga*), but PWS *kù* "to dig", Dagomba *ku-r-ge* "dig out" is also possible.

***D = R, *I = I** ***(n)K = NG, *A = A/E** ***K = K, *A/U = O**

DIRTY Maori *paruparu, poke:* Malay *carut* "dirty", Tagalog *dumí* "dirt", PWS *ba* "slime" ? , PWS *lu* "dust", Yoruba *luru* "powder", Bantu *bindu* "dirt". Bantu *bú,* "earth", Malay *bumi* "earth". Maori *pirau* "rotten", PWS *bi* "dirt".

***B = P, *A = A** ***B = P, *A = O** ***D = R, *U = U** ***B = P, *I = I**

DOG Maori *kurī, kīrehe,* PPN *kuli "dog". Togo Remnant (Heine) has *o-kulí "mouse". The Maoris ate rats and dogs. Bantu for "mouse, rat" is *puku*. [Basque *txakur, zakur, or, ora-* "dog"]. PWS uses *ku(li)* for "stomach". The "dog" may have been recently introduced in Africa at the time when the Maoris left. The indigenous African cattle of Lake Chad were called *kuri,* Cretan Linear A *KURE-MU* "kuri cattle". Maori *kīrehe* "dog" perhaps related.

***K = K, *U = U** ***L = R, *I = I**

DOUBLE Maori *paparua* "double", where *papa* refers to "calabashes, bowls, boxes, buttocks", and *rua* means "two". Originally *papa* meant "wings" in Niger-Congo. Pāpāringa means "cheek", with a plural article added to the word for "two". The word shows how numerals were once attached to concrete thing counted. *Rererua* "double" has the same structure. *Rere* means "sail" or "fold" (*papa* also has the latter meaning), *rua* "two". Canoes with two sails were used by the Polynesians. See *rā* "sail".

***P = P, *A = A** ***R = R, *E = E**

DRINK Maori *inu, unu* "drink", PMP *inu "drink", PPN *(i, u)nu "drink", Fijian *gunu, unu* "drink", PWS *nu* "to drink", PWN *ŋU* "drink", PWS *mìn* "to drink". Perhaps reduplicated. Malay *minum* "drink", Tagalog *inumin* "drink", . PWN *ŋIU, ŋIUM, ŋU* "to drink", Bantu *nyo* "drink", *NÚ* "drink", Kongo, Bangi *nua* "drink", Swahili *nwa* "drink", Kele *mwa* "drink", Poto *mele* "drink", Lolo *mela* "drink". Malay looks like a good starting point here. Fijian *gunu* has *g = ŋ*. Yala has *oko-nu* "mouth". Togo Remnant (Heine) has *míni "to lick". Maori *kai*[* kadi] "drink" (but not of water), compare PWS *lì, (di)* "eat", also "drink".

***N = N, *U = U** ***M = #, *I = I** ***D = #, *I = I** ***K = K, *A = A**

DRIP, DROP Maori *pata* "drop of water, drip", *patapata* "to drip, drop", Raro. M. *pata* "a drop, to drip", PPN *pata "raindrop", PWS *pat* "swamp", Nyangbo *a-patapata* "swamp", PWS *bàt* "swamp". Malay *bata, batu* "brick, tile". Nyangbo has a noun prefix *a-*.

***P = P, *A = A**

DUNG, DIRT Maori *tūtae* "dung", *turuma* "faeces", PWS *tù* "heap up" (with suffix), Bantu *tunda* "heap up". The *–ma* is used of "faeces" in Niger-Congo. Compare PWN *TÚPH* "vomit". The *–ta* may be "hand" (used to defecate). Maori *pirau* "putrid, decayed" may be related to PWS *bi* "dirt, dung", PWN *BÍN* "excrements", Bantu *bí,i,* "excrement". Mande M *bu* "excrements".

***T = T, *U = U** ***B = P, *I = I**

EAR Maori *taringa* "ear", PPN *taliŋa "ear", Malay *telinga* "ear", Tagalog *tainga* "ear", PWS *tiè* "to hear", Tschi *tie, te, tse* "hear", PWS *tan, tal* "to know, understand", PWN *THÚ(I)* "ear", Bantu *TO* "ear", PNC *to, tu* "ear" (Greenberg 1963), Auen (Khoisan) *ts'a* "hear". I take Maori *taringa* from PWS *ta + ri* "plural/pair suffix", "two" + suffix *–nga* (plural "article" = *n + ka* "sides"), probably seen in Mangbei *su(go)* "ear", Sari *to(ko)* "ear". Many Congolese words have a prefix *li-*, with suffixed *–i* (from *(l)i*), on "ear", eg Bangi, Ngala, Poto, Ngombe, Soko, Kele *litoi* "ear". Compare Gurma : Akassele *di-nū-ri* "hearing"[*di = ri*]. Canterbury and Murihiku Maori have *tarika* "ear".

***T = T, **A = A** ***L = R, *I = I**

EARTH Maori *ao, oneone* ("mother earth"?) *; rā* "by way of", *ara* "way, path", *rae* "headland", PPN *lalo "below", Malay *tanah* "earth", *darat* "land", Tagalog *daigdig* "earth", PWS *là* "earth", (*lo*), sometimes with retroflex *d.,* lost in *ao.*

***L = #, *A = A** ***L = R, *A = A**

EAT Maori *kai* "eat", *makai* "keep eating portions", PMP *ka "eat", PPN *kai "food, eat", Malay *makan* "to eat", *makanan* "to bite", Tagalog *tagatin* "to bite", , PWS *ká* "to bite", Songhai *mê* "mouth". Balante *doma* "to bite", Mandyak *rume* "to bite", Dagomba *dume* "to bite", Bantu *luma* "to bite", Swahili *uma* "to bite", Lolo *lomata* "to bite". Vekens *oka* "bite".

***K = K, *A = A** ***M = M, *A = A** ***D = #, *I = I**

EGG Maori *hua manu* “egg (fruit of bird)”, Hawaian *hua moa* “egg”, PPN *pua “flower”, Fijian *bua* “flower”. PPN *fua “fruit”, Fijian *vua* “fruit”. Togo Remnant (Heine) has *li-fula “egg”. PWS *bu* “bend, hatch”, PWN *BHUM* “create”, *BUT* “beget”. The PWS root *pu* “appear” or *pù* “white” may be relevant. Maori has lost the medial consonant. Holoholo (Bantu) *husi,* “egg”, Ngombe etc *mombuma,* Soko *lohuma* , Kele *shuma* “egg” may be relevant. Malay *bunga* “flower, *buah* “fruit”, *timbul* “to appear” confirms original *B.

***B = H, *U = U** ***L/M = #, *A = A** [M. *huahua* “birds”, “boiler”]

EIGHT Maori *waru* “eight’, PPN *walu “eight”, EAS (F) –*bau* “eight”, Fijian *walu* “eight”, Tagalog *waló* “eight”, PWS *ba, gua* “hand, arm” + *ru(a)* “two” (hands) [8 fingers]. Atayan *pat* “eight”, with PWS *ba* > *pa.* Banjar *walu* “eight”, Rarotongan *varu* “eight”.

***B = W, *A = A ?** ***GHW = W, *A = A** ***D = R, *U = U**

EYE Maori *kanohi, karu, mata* “eye”*, pūkanohi, pūkonohi* “eye” (of staring eyes), PPN *mata “eye, face”, PPN *kOnohi “eye”, Malay *mata* “eye, Tagalog *matá* “eye”, Dahomey *nu-ku* “eye”, Guang *ku-ni-si* “eye”, PWS *nì, nù, nìa* “eye, see”, Tschi *e-nyua* “eye”, Akpafu *nyõ* “see”; *mata* < prefix *ma* + *ta* “take” = “comprehend”, *ta* “hear, understand”). An old word *m33* “see” exists in Egyptian (Gardiner 1957 : 450). Songhai *mò* “eye”, *ma* “hear, understand” (Westermann), Igbo, Mbum *ma* “to know, understand” (Greenberg), also Mandyak, Malinke *me* “know”, Bantu *man,* PB *manya “know” (Greenberg). PWN *MAN* “know”, PWS *mua* “take”. Bantu (Guthrie) *MO,N* “see”. Words of perception are often interchanged. However Swahili *ma-to* “eyes” (pl) and Sango *mē-ho* (from *ma-iho* “eyes”), Konde *ama-so* “eyes” (all Meinhof 1899) indicates *ma-* is a plural prefix. Maori *–hi* from *ki,* compare *kite* “see”. PWS has *kià* “to dawn, become clear, visible”, giving *kè, k’è* in various Niger-Congo languages. Bantu This is from an old word “to see” Meinhof has Urbantu *ili-γîko* “eye”. PPN *puku “protruberance”. Togo Remnant (Heine) has *ki-nu-bí “eye” and *mo^{o} “to see”. Maori *pi* “eye”. Compare PWS *bi* “small”, PWN *BI,* Bantu *beju* “seed”.

***N = N, *UA = O** ***T = T, *A = A** ***K = K, *A = A** ***B = P, *I = I**

EYELASH & EYELID Māori *kamo* “eyelash, eyelid”, *kamonga* “eyelash”, PCS *(kV)mV “eye”, Ngombe *mongbakali* “eyebrow”, *mokengisu* “eyelash”, Ngala *munkongie* “eyelash”, PWS *nì, nù, nìa* “eye, see”, Tschi *e-nyua* “eye” (dial), Avatime *ny-ma* “eye”, Dahomey *nù-kú* “eye”, Mangbetu *ngo* “eye”, N-S : Bagirmi *kamo* “eye, face”, C-N : Masai *(enk)omon* “face”.

***K = K, *A = A** ***M = M, *O = O** [PPN *kamo “blink”]

FALL (v) Maori *rere, taka,* PPN *lele "fly, jump, run", PPN *taka "roll", PWS *la* "to lie down, to sleep", PWS *là* "earth", Avatime *ka-la,* Ewe *de* "earth", (reflexes with *e* in Kwa, TogoR); PWS *ka* "close" (eyes), with prefix *ta,* compare Temne, Bulom *kanta* "to close".

***L = R, *A = E** ***T = T, *A = A** ***K = K, *A = A**

FAMILY Maori (distant family) inc. "bear, be born", *whānau,* PPN *fānau "offspring", Tagalog *mag-anak* "family", Bantu *biad "give birth", Koke (Adamawa-Eastern) *ba* "child", (Khoisan Sandawe *haba* "beget", Hiechware Naron (C) *aba:* "beget"). As usual Maori *wh = b.* This important item links Maori with Adamawa-Eastern & Khoisan. PWS *nà* "mother" (or from PWS *mu, muan* "to bear child"; Maori does not have the sequences **wham, wam*). Bantu *bánjá* "family".

***B = WH, *A = A**

FAR Maori *tawhiti;* PPN *tafiti "distant place", PWS *bi(a)* "place", PWS *ta* "thing", "stone, "hand" = article "one". Hence Tahiti "The Distant Place" + "small". Malay *itu* "far, there".

***B = WH, *I = I** ***T = T, *I = I**.

FAT/GREASE Maori *ngako, hinu* ; PWS *ku* "fat, oil", PWS *ni* "the inner" PWS *ka* "flesh", PWS *kì* "eat". Tagalog *mantikà* "fat" (lard). M. *ngako = kiko* "flesh" (diff. prefix). Or *g/ka/o.*

***(n)K = NG, *A = A** ***K = K, *A = O** ***N = N, *U = U** ***K = H, *I = I**

FAT (Adjective) Maori *momo* "fat, in good condition", also "offspring", "race, breed". Compare PWS *po* "person, seed, child". The Maori word is from a nasal grade of *po,* itself from PWS *bà* "big and round". Congolese languages have : Kongo, Lolo, Ngala, Poto *mpongo* "fat", compare PWS *ban, bal* "man", often a "big man" and PWS *bùà, (bo̲bo̲)* "a round, smooth, lazy, man". Maori *mōmona* "fat, fertile", Mande *mō-ti-le* "fattened".

***M = M, *O = O** ***M = M, *O = O**

FATHER Maori *pāpā;* Malay *bapak* "father", PWS *bábá* "father", PWN *BHÀBHÁ* "father, grandfather", Bantu *baba* "father, grandfather", Songhai *bàba* "father". Maori *matua tāne* "father", PPN *tama "child", but Fijian, *tama* "father", Tikopian, Tongan *tamai* "father", Maori, Tongan *tama* "term of address to man", Tagalog *tatay* "father", *amá* "father", PWS *tá, (tata)* "father", PWN *TA, TATA* "father", Bantu *taatá* "my father". Vekens *tata* "grandfather".

***B = P, *A = A** ***T = T, *A = A**

FEAR (v) Maori *mataku* (ie "death"), *wehi* "to fear". PMP *(t)akut "fear", PPN *ma-taku "fear", Malay *takut* "afraid", Tagalog *matakot* "to fear". Both these words refer to "death", PWS *mata, ku, ki, gue* "death".

***M = M, *A = A** ***K = K, *U = U** ***GW = W, *E = E** ***K = H, *I = I**

FEATHER Maori *hou, huruhuru, piki,* PPN *fulu "hair, feather", Malay *bulu, burung* "feather", Malay *puluh* "ten, feather". PWS *pí, pú* "feather" (forms with *–r* in Ekoi (Bantu), Bantu *budi* "hair, feather". Some Mande languages have *fu* "ten".

***B = H, *U = U** ***P = P, *I = I**

FEW Maori *torutoru, ouou,* (= "three"). Both these words are the same, but the second has lost its consonants. See "three".

***T = T, *A = O** ***T = #, A = O** ***D = R, *U = U** ***D = #, *U = U**

FIGHT (v) Maori *whawha* "fight", *riri,* "be angry", PPN *lili "be angry",Tagalog *maglaban, mag-away* "to fight", PWS *bua, ba* "hand", PWS *lib* "to kill", compare *li* " to eat"

***B = WH, * A = A** ***L = R, *I = I**

FINGER Maori *mikao* "finger", Yoruba *ika* "finger", [Lat. *micare* "raise fingers"]. Maori *korokoro* "finger", Indiki *ne-kara,* Kebu *ko-ka-ko* "hand", Mande *koni* "finger".

***M = M, *I = I** ***K = K, *A = A** ***K = K, *A = O** ***R = R, *A = O**

FIRE Maori *ahi, kāpura,* Rarotongan *a'i* "fire", *a'i-ta'u* "lighted fire" (PWS *tá* "fire", PPN *tafu "light a fire", Maori *tahu* "cook, set on fire"), Malay *api* "fire", Tagalog *apóy* "fire", PMP *apuy "fire", PPN *afi "fire", PNC *pi* "fire", Efik *fiá* "firewood", PWN *PI* "burn", PWS *ka(n)* "charcoal". Greek *pyr* "fire" may be related, PMP *apuy "fire". Maori *hapī, api* (Ryan) "oven". Maori *kāpura* "fire". Bantu (Johnston 1922: 296) *bu* (187), *buri* (121), *furu* (267), *pūe* (222), *pyu* (193) "fire".

***P = H, *I = I** ***K = K, *A = A** ***T = T, *A = A** ***R = R, *U = U**

FIRE Maori *kanaku* "fire", *kanapu* "lightning", *ina* "warm oneself", Tagalog *sunog* "fire", PWS *ná* "fire", Yoruba *iná* "fire". Maori *manawa* "heart" includes this root. It is possible that the root *na* "fire" is a nasal grade of *ta* "fire". So we have at least three different Niger-Congo words for "fire" with reflexes in Maori. Prefixes *ka-, kā-*. PWS *ka* "charcoal" ("hand"). Vekens *eka* 'to light", *kadra* "flame".

***N = N, *A = A**

FISH Maori *ika, ngohi,* PMP *ikan "fish", PPN *ika "fish", PWS *ka* "flesh, fish", Ahlo *i-kà* "fish". Malay *'ikan* "fish" (Dempwolff) shows a trace of a consonantal prefix. Tagalog *isdâ* "fish". The Maori *ika* (& *ngohi*) also refers to a slain warrior, sacrificial victim etc. Animal flesh was not available in NZ. For *ngohi* compare PPN *ŋū "marine creature", Māori *ngū* "squid", Fijian *gu/gu* "fish species", Raro. *ngoe* "catch, ensnare", Bantu *guid* "catch", PCS *ku "catch", *kVnj "fish", Bantu *cu,i* "fish", PWN *KHUINI* "fish". See below.

***K = K, *A = A** ***K = Ŋ, *U = O** ***K = H, *I = I**

TO FISH Maori "to fish", *hī* , PPN *hī "to fish", PPN *kUkU "fish sp." Bantu *cui* "fish", PWN *KHIUNI, KHUINI* "fish". The *NI* is a plural suffix.

***K = H, *I = I**

FIVE Maori *rima*, PMP *lima(h) "five, hand", PPN *lima "five, hand", Fijian *liga* "hand", *lima* "five", Malay *lima* "five", Tagalog *limá* "five", PNC *ma,* "make, end", Indonesian *lima,* "five". Here *ma* = "end of hand", Bantu *lîma* "to come to an end". Hawaian *lima, ʻelima, ʻalima* "five" (with prefixes).

***L = R, *I = I** ***M = M, *A = A**

FLOAT Maori *mānu, rewa,* Maori *rere* "flow", PPN *Lewa "float", PNC *ma* "liquid", Maori *mākū* "damp, moist", *māturuturu* "drip", PNC *la* "flow". Malay *aliran* "flow".

***M = M, *A = A** ***L = R, *A = E**

FLOW Maori *rere, pātere* "flow", Maori *pata* "raindrop", PPN *pata "raindrop", Yoruba *ra* "fall of rain", PWS *ba* "swamp". PPN *pata "raindrop". PPN *LaLi "wet", PPN *lele "run". Compare previous entry.

***L = R, *A = E** ***B = P, *A = A**

FLOWER Maori *pūāwai, putiputi* "flower", *pua* "blossom", PMP *buaq "fruit", PPN *pua "flower", Malay *bunga* "flower", Tagalog *bulaklák* "flower", PWS *bua* "grass cloth", PWS *pu* "to appear, come out", PWS *pú* "bush, field", Guang *i-putu* "bush", Likpe *di-butu* "bush land', Ahlo *i-butu-de* "fallow land". Vekens *mbuambu* "flower" N-S.

***B = P, *U = U** ***P = P, *U = U** ***T = T ?**

FLY (noun) Maori *ngaro* "fly", Ubangi : Ndogo, Sere, Tagbu *náo,* Bai, Bviri *náu* "fly", Sere, Tagbu *no* "to go", Mondu, Feroge *no* "to go", PWS *na* "to go", Alagiang *na-õ* "to go away". Often *na* means "return" (Flies keep coming back, especially in Africa). The disease of the tsetse fly is called *nagama* in Africa. Maori *ngaro* < **nagaro.*

***N = N, *A = A** ***G = G, *A = A**

FOG Maori *kohu, pūkohu* (with prefix), PPN *kofu "mist", Malay *kabut* "fog", PWS *(m)-bu* "dew", Alege (B-C) *ke-bu* "dew", PAB *pulu "foam", PWS *pú* "foam", Igbo *o-fúfú* "foam', Ewe *a-fú* "foam". Tagalog *bulâ* "foam", Malay *buih, busa* "foam".

***B = P, *U = U** ***P = H, *U = U**

FOLLOW Maori *whai* “follow”, also “settled, resident”, PPN *fai “follow”, PWS *ba* “be in a place”, “go”, PWS *bía, bá* “to come”, PWN *BA* “to be”, Afro-Asiatic *ba* “to come”, Chad : Tera, Kulung *ba* “come”, Cushitic : Galla, Sidamo *ba* “go”, Semitic : Arabic *ba:?* “return”. [Greek *ba* “go”]. The word is very old, and associated with PWS *bia* “place”. Common Maori mutation of **b* > *wh.* The Maori *–i* is a “transitiver”.

***B = WH, *A = A**

FOOD Besides the usual Maori word *kai* (PWS *ká* “bite”, PWS *ka* “flesh”, PWS *kà* “charcoal”, *kàn, kàl* “bread or cake”, Tschi *k’e* “cooked”). PPN *kai “food, eat”. Maori mythology refers to a food called *ari* (bloodless and sapless) in the land of Irihia, a hot country to the east of Uru (Best 1924/1952: 15). This *ari* is cognate with Igbo *a-ri* “food”, PWS *lì*”to eat”. PPN *ali “fish species”. The word *ari* is the Dravidian word for “rice”, compare *vari, wari, pari*. We are dealing with an old Niger-Congo labiovelar prefix. The placename Kaiapoi incorporates *kai* + *apoi* < PWS *ba* “barn, store”, Yoruba *a-ba* “yam store”. Maori *apo* “put into a heap”, *poi* “ball, lump”, *pā* “clump”, *pae* “be collected together, lie ready for use”, *apaapatū,* also *apaapa* “heap”. Mangbetu has *pai* “bread of manioc”. Bantu *bombo,* PWN *BHOM* “bundle”.

***K = K, *A = A** ***GW = #, *A = A** ***R = R, *I = I** ***B = P, *A = A/O**

FOOT Maori *waewae,* “foot”, PPN *wa?e “leg”, PWS *kua* “leg, foot”. Kelle *ko-gbari-ko,* Efik *i-kpat, u-kpot,* Dagomba *gba-le* “leg”, Animere *de-kpare* “leg”, Newole *kpole* “leg”. Compare PWS *gua* “hand, arm”, Yoruba *o-wo* “arm”, Igara *o-wo* “arm”, Bowili *a-wo-e* “hand”, Nupe *e-gwa* “arm”. Tagalog *paá* “foot, leg”. Bantu *padi* “foot”, PPN *patu “strike” (kick). PWS *bía, bá* “to come”. (leg, foot). Chari-Nile : Dair *bal,* Old Nubian *pal* “go out”, Afro-Asiatic : Hona *bai* “to come”, Tera *ba,* Kulung *ba* “to come”, Sidamo *ba* “go”.

***KW = W, A = A** **(*GW = W, *A = A)**

FOUR Maori *whā* “four”, PPN *fā “four”, Malay *empat* “four”, Tagalog *apat* “four”, PWS *búá* “hand, arm” (ie four fingers), *(ba),* Guang *ge-bá* “upper arm”, Beri *ke-ba* “shoulder”, Efik *u-bak* “arm”, Kissi *ba* “arm, hand”. Kele *wa* “arm”, Ngombe *ebami* “right arm”.

***B = WH, *A = A**

FOWL Maori *moa* means "dinornis", but in most Polynesian languages *moa* means "fowl". Fijian has *toa* "fowl", but *moa* "brown quail". Samoan has *toa* "cock", *moa* "hen". PPN *moa "fowl". Maori *toa* means "male" (of animals), also "warrior", "brave". Compare West Atlantic (Westermann 1928) Gola *o-tō* "hen", Biafada *a-tsua* "fowl", Kissi *sō* "fowl", Temne *a-toko* "fowl", Landoma *a-tsoŋo* "fowl", Bulong *a-tsogo* "fowl", also *e-sok,* Mampa *i-sok* "fowl". Probably *moa* is a nasal grade of PWS *bùà, bùò* "hole", Delo *bo* "hole" (trap). Maori *poa* "food, bait". Leenhardt cites *boa-* "bird of prey", *moa* "enclosure". Bantu *cambo* "enclosure".

***T = T, *O = O (**UA > O)**

FRUIT Maori *hua* "fruit", PPN *fua "fruit", PWS *pu* "to appear", Tschi *pu-e* "to appear, come forth in the sun", Igbo *pu-a* "to come up", Mossi *puka* "to open". The word is used of flowers. See "egg".

***P = H, *U = U**

GATE Maori *kūaha, kūwaha* "gateway, entrance", PWS *guá* "gate", Ewe *a-gbó* "gate", Guang *ge-gba* "tower", Gbari *gwa-mi* "gate", Boko *gbā* "tower". Fluctuation between *gw and *gu.

***GW = W, *A = A *G = K, *U = U**

GIVE Maori *hōmai, hoatu,* PWS *ka* "hand" (action of hand), PWS *tú* "to take", Maori *mai* "hither", PWS *má* "this, here".

***K = H, *A = O ?**

GOOD Maori *pai* "good", *paki* "fine" (weather), Malay *baik* "good", PPN *pai "approve", PWS *pai* "full" ? PWS *bà* "great, grand", PPN *paki "fine" (of weather), PWS *pat* "sun" (*pati*). ? Bantu *pa* "gratify". Wolof *baax* "good". [Basque (*bai, ba* "yes")].

***B = P, *A = A ?**

GRASS Maori *tarutaru, otaota, māota* "green" (of foliage), *matomato* "green of foliage", PPN *mata "green, raw", Tagalog *damo* "grass", Bantu *tadada* "green", PWS *luá* "tree, wood" (*da, daru*). The *r* has been lost in *otaota*. Possible connection with Maori *manga* "branch", *mangu* "black".

***D = T, *A = A** ***D = R, *U = U**

HAIR Maori *makawe, māhunga* " hair of head", or *huruhuru, uru* (pl), PPN *awe "hair, strand", PPN *fulu "hair", PPN *fuka "cut hair", Maori *huka* "lock of hair", Malay *bulu* "hair, feathers", Tagalog *buhók* "hair", PWS *pú* "hair", PWS *ge* "skin" (*we*). There is a simplex Maori *awe* "hair strands". The African etymology is based on the practice of taking enemy scalps (skin with hair attached), compare the American Indian "scalping". The *ma-* is a plural prefix. Poto *moswe,* Kele *swe,* Ngombe *moswi,* Soko *ngwele* "hair". For *huruhuru,* Ekoid *m- fur* "feather". [English *fur*]. Maori *puru* means "curly" (of hair).

***P = P, *U = U** ***P = H, *U = U** ***GHW = W, *E = E** ***R = R**

HAND Maori *ringa, ringaringa,* (see *rima* "five"), *ringaringa* "knucklebones", "fingers, hands" PPN *lima "five, hand". Maori *kaurimarima* means "a pointed piece of wood, rubbed briskly on another to procure fire". Compare *taringa* "ear", Rarotongan *taringa-meika,* "hands of bananas". Presumably earlier **rima-ka,* with *ka* "hand". Fijian has *lima* "five", *liga* "hand". Malay *tangan* "hand" (*ta, ka*). Canterbury and Murihiku Maori have *rikarika* (Beattie). Maori *ngirangira* "hand", cf *ngita* "fast, secure", *(k)ita* "tightly (clenched)",**ta*. Possibly *ringa* > *ra,* with *n-ki-*ringa.* Root *ki is "small" (= "hand", cf *ka* "small", "hand").

***L = R, *I = I** ***(n)K = NG, A = A** ***K = K, *I = I** ***T = T, *A = A**

HANG Maori *iri* "hang, be suspended", *piri* "attached", PPN *iLi "rest on something", PNC *li* "rope", Grebo *li,* Bini *iri,* Idoma *oli,* Jaba *lik* "rope". Mande *siri* "tie". Perhaps compare *kirikiri* "basket" (or *tiri* ?). Malay has *tali* "tie", "rope". PNC *ki "left hand".

***L = R, *I = I** ***K = K, *I = I**

HE, SHE Maori *ia* "he, she, it" (normally used of humans, less often of other animates, Bauer 2003 : 262), Malay *dia, ia* "he, she", Malay *jantan* "male", Tagalog *siyá* "he, she", PPN *ia "he, she", Fijian *ko/ya* "he, she", PWS *gi(a)* "this", Yoruba *éyá, éyáé, yè* "he", *è, é* "she" etc, Ewe *éyá, yé* "he, she, it". For Bangi *ye* (Stapleton 1903 : 61); for a Bantu list of 3rd personal pronouns see Torrend (1891 : 161) : *ye, ya, e, ue* etc. From a weak lenis labiovelar (palatalised). Compare Malay *yang* "who", Rarotongan *a* (from *ia*) "relative pronoun" (before personal pronouns, proper nouns). Malay *ya, ia* "interjection of address".
***GHWY = I/Y, *A = A**

HEAD Maori *upoko, mātenga, māhunga, pane,* PPN *pale "head-dress", Niger-Congo : Songhai *bo(n)* "head", Mel *–bomp* "head" (Atlantic). Malay *kĕpala* "head". Maori *uru* "head" (sg. prefix), Tagalog *ulo* "head" are related to PWS *lu, (du)* "head". Vekens *dru* "head", Luo (N-S) *ruoth* "head". Maori *kane* "head", *mākara* "head", *e kara* (voc.), "old man", AGk *kara* (voc) "head of a traveller", PWS *ka* "headman", PWS *gán* "top", "headman". Maori *anao* "expression of assent" (nod). [Basque *buru* "head", prefix *bu-*].
****B = P, *A = O ?** ***G = K, *A = A** ***G = #, *A = A** ***N = N, *A = A**

HEAR Maori *rongo,* PPN *roŋo "hear", Niger-Congo : Soninke *toro* "ear", PWS *tiè* "to hear"(from **ta). The Maori *-ngo* resembles the *-nga* (= "sides") found in "hand", *ringaringa.* Maori *taringa*"ear", Malay *telinga* "ear". This *–nga* may be a plural suffix = the plural article *nga* . Hands and ears are plural . But Malay *dĕngar* "hear". Possibly root *to* "hear" + *ro* > *ro.* Easter Island has a script called Rongorongo (used for recitations). The word *rongo* essentially means "apprehend by the senses" (except sight): "hear, feel, smell, taste". The senses are all connected. Hence the use of the same word. PWN *LOD, (LUD)* "to look at", *DOL* "look at, love" are ultimately related. Ngombe has *danga* "nose", Soko *lomba* "smell", Holoholo *lol* "to look". The passive of Maori *rongo* has the forms *rangona, rongona,* indicating fluctuation of the vowel after *r.* In Maori "smell" is also expressed by *hongi,* used also of pressing noses in greeting. PWN has *ŋUN, ŋUNK* "to smell", Bantu *nu,nk* "to stink". [*ŋ* < *nk, k* > Maori *h*].
***L = R, *UA = O ?** ***K = H, *U = O**

HEART Maori *manawa* , PPN *mAnawa "breath", PWS *na* "fire". See Maori *ina* "warm oneself". PWS *man, mal* "flame", VI Bamana *mana* "flame" etc. For *–wa* compare III Kebu *ná-wo* "fire", IV Gan *na-ga* "fire" (a labiovelar *gw). Luo (N-S) has *mac* "fire".
***N = N, *A = A** ***M = M, *A = A** ***GW = W, *A = A**

HEAVY Maori *taimaha, toimaha, taumaha,* PPN *toi "pull" (rope), PWS *ta* "thing", "carry", PWS *gán* "big", Ewe *ame-gá* "chief" has the prefix, Sanskrit *maha,* Greek *mega* "big". Maori *maha* "many" etc. Fluctuating vocalism *tai, toi, tau*. Niger-Congo IV Dagomba *ta-he* "to bring". Bantu *dito* "heavy", Bangi, Poto, Kele *lito* "heavy".

***T = T, *A = A** ***M = M, *A = A** ***G = H, *A = A**

HERE Maori *konei,* PPN *nei "here, near speaker", (See Pawley 1966 : 44). Malay *sini* "here", PWS *ni* "this", Dagomba *nyi-ne* "this", Malinke *nîn* "this". Prefix in Edo *o-ni* "that", Nupe *a-ni* "thus", Kussassi *a-ní* "there". The Maori *nei* may be due to Dagomba type forms (also Malinke).

***N = N, *I = I**

HIT Maori *pā, patu* "hit, kill", *utu* "revenge", PPN *pā "slap, strike, touch", Malay *pukulan* "hit", Tagalog *paluin* "to hit", PWS *puà* "to strike" [*ua* > *a*?], Ahlo *pò* "to strike". PWS *tù* "to strike", Bantu *tuut* "to beat", PWN *PAT* "sieze", *BAT, (PAT)* "to tear" (PWS *bua, ba* "hand"), Bantu *budag* "kill" (Meeussen), Bangi, Lolo, Ngala *boma* "kill", Soko *bola* "kill", Kongo *vonda* "kill".

***P = P, *A = A** ***T = T, *U = U**

HOE Maori *kō* "hoe", *kōkō* "dig with a *kō*", PWS *kù* "to dig", or *ka* "hand", PWN *KOM* "hollow", PWN *KHOLO* "hole, hollow", Yoruba *ko* "hoe", *ko. ilà* "to cut face marks" (Swahili *lima* "to hoe"), Ewe *kòdzì* "a hoe", with *dzi* "dig", perhaps PCS *ko "break, split". The word is probably from *ka* "hand". Possibly PPN *koi "sharp", Maori *koi* "sharp, wound with spike". The Maori *kō* was also used as a weapon. Maori *kokoi* "sharp". Related words for "hoe", "dig" with *ko* in Yoruba.

***K = K, *A = O**

HOLD/TAKE Maori *(pu)puri, (ra)rawhi,* PWS *búá* "arm, hand", PWS *puà* "to strike", Gurma *puà* "to strike", Jaba *pu* "to take". PWS *lá* "to make", PWS *la* "to buy", with *whi* < PWS *bi* "bear". PAB ***p**ati "hold" (compare "hit").

***B = P, *U = U** ***L = R, *A = A** ***B = WH, *I = I ?**

HOLE Maori *poko,* PPN *poko "hole", Tagalog *butas* "hole", PWS *bùò* "hole", Kussassi *bò-kó* "hole", Mossi *bo-ko* "cavern". Ngala *lipoko* "hole", Lolo *jipoku* "hole".

***B = P, *O = O** ***K = K, *O = O**

HOW Maori *pē(w)hea,* PPN *fEa "where", Malay *bagaimana* "how", Tagalog *paanó* "how", PWS *ba* "someone", PWS *–ba-* "they" (often with *a* > *e*). Kongo *aweyi* "how ?" PAB *pî "where?"

***B = P, *A = E** ***B = WH, *A = E**

HUNDRED Maori *rau* "hundred", "multitude, number", Malay *seratus* "hundred", Indonesian *ratus* "hundred", *seratus* "hundred", Fijian *drau* "hundred", Samoan *selau* "hundred", Thai *(h)rawy* "hundred ". The word for "hundred" may be based on a Niger-Congo word for "leaf ", Bangi *langu,* Ngala *langu,* compare Voltaic *va, *van, Swahili *jani,* Bantu *janí*, "leaf". That is the Maori *r = l, a = a ,* with *gu > w/y,* indicating a labiovelar. The Maori *u* is from *w,* which comes from the labiovelar. In Maori an original **t drops out. In Bangi and Ngala it becomes *n,* compareVoltaic *van, Bantu *janí* etc. In the same way the Bantu word *gana* "hundred" is probably based on a similar word for "sand".

***L = R, *A = A** ***GW = U**

HUNT Maori *whaiwhai, whakangau* , PPN *fai "follow", Malay *berburu* "to hunt", PWS *ba* "to come"? , PWS *búá(k)* "arm" (hence "fight"). PWS *ka* "arm".

***B = WH, *A = A**

HUSBAND Maori *hoa, tāne* "husband", PPN *soa "friend", Malay *suami* "husband", Tagalog *asawa* "husband", PWS *tá* "father". PWS *kú* "companion". PPN *tama "child", also "father" (Tikopian, Tongan, Fijian), Maori, Rarotongan, Tualofan *tama* (term of address to man). Maori *tāne* = Togo Remnant *o-táni "man, person" (Heine 1968 : 246).

***T = T, *A = A** ***N = N, *A = E** ***K = H, *U = O**

I (1st person pronoun) Maori *ahau, au, awau* "I", Malay *ana* "I, me", Malay *aku* "me, myself", Tagalog *akó* "I". Malay *ana* is from PWS *na* "I". PWS *au "first person singular", Tikopian *avau* "I", Samoan *a?u* "I", probably from PWS *kúá* "man/slave", Songhai *ai* "I" ?, PWS *kúán* "life", "soul". Compare Khoi (Nama) *khoi* "person". The original *KU fluctuates with *KW here. Maori *h* > *k* (not *kw). Old Bantu *ŋgu* "I, my" = *aku* etc.

***KW = W, *A = A** ***K = H, *A = A** ***K = #, *U = U**

IF Maori *ki, ma, me,mehemea* "if", PPN *me?a "thing", PWS *ki(a)* "to make" (make a supposition), PWS *ma*"finish", PNC *mah* "make, mould", Fula, Wolof, Serer *mah* "make" (a supposition). Perhaps Maori *ai* should be included here (= PWS *gue* "say").

***K = K, *I = I** ***K = H, *I = I** ***M = M, *A = A (+ *k = h)**

IN Maori *hei, kei, ki, no,* PPN *nA "there", PWS *kí* "remain", PWS *kia* "go", PWS *nà* "remain", *na* "top, on".

***K = K, *IA = E** ***K = H, *IA = E** ***K = K, *I = I** ***N = N, *A = O**

KILL Maori *patu,* PPN *pā "strike", PWS *puà* "to strike", Tagalog *patayin* "kill", Bantu *pum* "to strike", Bantu *YÌPAG* "kill", *BÓD* "hit and kill", PWN *BUD* "kill", Swahili *wa* "kill". See "hit", PWN *BAT, PAT* "tear". PWS *bua, (ba)* "hand". PAB ***p**ati "hold". Maori *kōhuru* means "to murder by stealth". PWS *kú, kúá, kúí* "to kill". Vekens *bu* "corpse".

***B = P, *A = A** ***K = K, *UA = O** ***K = H, *U = U**

KNEE Maori *turi,* PPN *turi "knee", Malay *lutut* "knee", Tagalog *tuhod* "knee" PWS *lu* "knee", *(du),* Bantu *du(i),* PWN *DUI* "knee". The Maori *–ri* is a plural suffix. Akur *i-rup* "knee", Ahlo *i-lu-ku* "knee", Mossi *du-n-di, ru-m-di* "knee", Dagarti *du-ni* "knee".

***D = T, *U = U** ***D = R, *I = I**

KNOW Maori *mātau, mōhio, kite* "know, see", PNC *me, ma,* "know", PWN *MAN* "to know", Bantu *man* 'to know". Compare PWS *ta* "to take", ie. "to comprehend". PWS *kià* "to become visible". Malay *tahu* "know", Tagalog *malaman* "to know".

***M = M, *A = A** ***T = T, *A = A** ***K = K, *I = I** ***K = H, *I = I**

LAKE Maori *roto,* PNC *tua* > *to* "water", PPN *loto "pool", (PPN) *lolo "flood", Malay *danau* "lake", Tagalog *lawa* "lake". PWN *THU, THUA* "water, river", Bantu *to* "river". Khoisan *tu* "rain, rainwater", PNC *ra/la* "flow". PMP *ZuRug "overflow". Compare (PPN) *sū "liquid", "watery", Malay *susu* "breast, milk", with *thu > *su* as in Tschi *n-su* "water", Ake *su* "water" etc. Maori has *ū* "arrive by water". (Compare Linear A *U* "boat"). With Maori *ro-* compare PPN *lanu "fresh water" (PWS *nu* "pool, drink"). [Fur *roo* "river"].

***L = R, *A = O** ***T = T, *UA = O**

LAUGH (v) Maori *kata* , PPN *kata "laugh", Nukuoro *gada* "smile", Malay *ketawa* "laugh", Tagalog *tawa* "laugh", PWS *ká* "to speak", Animere *ka-te* "to speak", PWS *tá* "to speak", Bantu *CÈK* "to laugh". PWN *KIAK* "laugh".

***K = K, *A = A** ***T = T, *A = A**

LEAF Maori *rau* "leaf", Malay *daun* "leaf", Tagalog *dahon* "leaf", PMP *Dahun "leaf", PPN *lau "leaf", PPN *lala "tree", but *pitau* "young shoot, frond", PWS *pita* "leaf", Gbari *fitero* "leaf", Santrokofi *le- fata* "leaf". It is just possible that *rau* < *la-fa-ta-ra* (or < *-ro* = *rau*) ?

***L = R, *A = A ?** ***P = P, *I = I** ***T = T, *A = A**

LEFT Maori *mauī* "left hand", Malay *kiri* "left", Malay *kidal* "left-handed" Tagalog *kaliwâ* "left", PWS *b(u)a* "hand" (nasal grade *m-ba* > *ma*) + PWS *bi* 'bad" (English "kak-handed"), *bi* > *whi* > *wi*. But PNC *ku "left hand".

***(m)B = M, *A = A *B = WH/W, *I = I**

LEG Maori *waewae* "leg", PPN *wa?e "leg", Malay *kaki* "leg", Tagalog *paá* "leg", Efik *i-kpat* "foot", PWS *kua* "leg", Guang *de-kpare* "leg" (dial), Animere *de-kpare* "leg", Dagomba *gba-le* "leg". PWN *GWA* "fall", PWS *gua* "hand, arm", Nupe *e-gwa* "hand, arm" etc. The Maori *e* must be from an old definite article, *-le,- la.* Probably reduplicated because "legs" are plural.

***KW = W, *A = A (*A = E)**

LIE DOWN Maori *takoto,* PPN *takoto "lie down", Tongan *tokoto* (singular), *tākoto* (plural) "lie down", Malay *letak* "lie down", PWS *la, da* "to lie", PWN *DÁD* "lie down", Fula *dyōdāde* "lie down", Bantu *dangan* "lie down", PWN *KÁÀ* "headrest", Bantu *kata* "headrest", PWS *ka* "ring" (headpad). Original *d. PAB ***da** "lie down, sleep". Compare Maori *rae* "promontary", "lie exposed", *raha* "extended", *raharaha* "spread out", *rahi* "great" ?

***D = T, *A = A *K = K, *A = O *T = T, *A = O ?**

LIQUID (PPN) *sū "liquid", East Futunan *sū* "watery" (of taro), "soup", Tongan *hū* "wet", Fijian *su(u)* "soup", Maori *ū* "breast", *wai ū* "milk", Maori *ū* "arrive by water", Maori *tū* "part of fishing net first in water", *tūtū* "full tide", *tū* "be high" (of sea). Possibly PWS *tu* "water" is the ultimate source here. It has reflexes *tu, du, su.* Malay *susu* "milk, breast", Maori *ua* "rain" is taken from PMP *quZan (Elbert 1964 : 404). See under "rain".

***T = #, *U = U**

LIVE (v) Maori *ora, noho* "dwell, live", Malay *berada* "live", *dudok* "dwell", Tagalog *buháy* "alive", PPN *ola "life", PPN *nofo "sit, dwell", Fijian *no* "lie" (of things), PWS *la* "there", PWS *nà* "to be, inhabit". I interpret the *o* of *ora* as < *(n)o-*. The *ho* of *noho* is from PWS *ba* "to remain, to be in a place", Bantu *ikala* "to remain" with a final *–la* which perhaps corresponds to the *ra* of *ora*. Compare "lie down", PAB ***d**a. Vekens *ora* "to live" N-S.

***N = N, *A = O** ***K = H, *A = O** ***N = #, *A = O** ***L = R, *A = A**

NOTE: The word *orangutan* (Borneo and Sumatra), "man of the woods", Malay *orang* "man", *hutan* "jungle" suggests Maori *ora* "alive", also "survive", "slave" (*oranga* "food", "survivor"), Maori *uta* "inland, land". Atlantic (Niger-Congo) has an Orango language.

LONG Maori *roa* "long, length", PPN *loa "long", Malay *lama* "long" (time), PWS *la, lala* "long, old", PWN *DADA* "old", PNC *da* "long", *da* "be long", Bantu *dai* "long",

***D = R, *A = O** ***D = #, *A = A**

MAKE Maori prefix *whaka-* "make", Malay *buat* "make" (from PWS *búá, (ba)* "hand, arm"). Tagalog *marka* "make", PPN *faka- "causative". Maori *hanga* "make" from PWS *ka* "hand". Maori *kai-* "agency prefix". Ndogo (Santandrea) has *baka* "make".

***B = WH, *A = A** ***K = K, *A = A**

MAN, MALE *tāne* (see under husband). Maori *tāne* "man" is cognate with Togo Remnant *o-táni "man". Maori *tai* (term of address), *kai rākau* "armed men", Vai *kai* "man" ; likewise prefixes *tai-, kai-,* may be from **tani, *kani* "man" [Greek *o tan* "sir"]. Khoisan *khoi* "man".

***T = T, *A = A** ***K = K, *A = A** ***N = N/#** ***I = I/E/#**

NOTE : The M. word *moko* "facial tattoo" means "man" in Mande and Mondu (Adamawa). Sere (Adamawa) has *moloko* "male" (infixed). Mangbetu (CS) *moko* "sheath" (penistache ?).

MANY Maori *maha, tini, huhua,* PPN *mano "many", PPN *tini "multitude", PWS *gà* "hundred" (*ma-ga), Bantu *kulu* "big", PNC *ti* "small plural prefix", *ni* "plural affix".

***G = H, *A = A ?** ***K = H, *U = U** ***T = T, *I = I**

MAST Māori *tira* “mast of canoe”, “pole”, Rarotongan *tira* “mast”, PPN *tila “mast, yardarm”, Malay *tiang* “pillar, post, mast”. The element *ti-* is PWS *tí, tú* “tree”, PWN *TÍ* “tree”, used in various languages for “mast”. Compare Mande *yiri* “tree, mast”. The element *–ra* may be “go” = “sail” (or demonstrative *la, ra*). [Latin has *arbor* “tree, mast”]. Māori *tia* “peg, stake” is a doublet, and also means “drive in pegs” (action of noun).

***T = T, *I = I** ***R = L, *A = A** **with *L/R/D = #**

MEAT/FLESH Maori *kikokiko* “meat”, *io* “portion of flesh, cut into strips”, PPN *kiko “flesh”, PPN *io “strip of flesh”, PWS *ka* “meat”, Ahlo *ika,* Animere *ke-ka* “flesh” [*a* > *o*], PWS *ká* “to cut”. Maori *ki,* PWS *i, ke* are prefixes. The form *io* has suppressed the consonants. PWN *KHANT* “cut off” shows a lenis consonant which is easily reduced to a fricative or zero. Bantu *kat, kant* “cut” . Togo Remnant (Heine) has *ki-ka “flesh” [*a* > *o*].

***K = K, *A = O** ***K = #, *A = O** ***K = #, *I = I**

MEETING (PLACE) Maori *marae* “meeting place, courtyard, central area of village settlement”. PWS *má* “town, tribe, nation”, Togo Remnant (Heine) *o-má “city”. Vekens *oma* “assemble”.

***M = M, *A = A**

MILK Maori *ū* “teat”, Maori *wai-ū* “milk” (compare *ū* “arrive by water”), Rarotongan *u* “breast, udder, milk”, PPN *toto “blood”, (PPN) *sū “liquid”, EFU *sū* “watery soup”, SAM *sū* “watery”, TON *hū* “wet”, FIJ *su* “soup”. I connect this with PWN *tu, tua* “water”, Bowili *ku-tu* “soup”. Swahili *mu-toto* “child” is probably related .

****T = # (S), *U = U**

MOON Maori *marama, māhina* “moon” (archaic), “twilight”, Malay *bulan* “moon”, Tagalog *buwán* “moon”, PPN *malala “charcoal”, PWS *la* “day”, (*da*), Compare Maori *rā* “sun”, *atarau* “moonlight” (*ta* “fire”, *ra* “day”, “sun”). The moon is thought of as a “white” *ma* “sun” *ra.* The initial syllable *ma-* is a prefix just like *a-* in *atarau.* Compare *mārama* “light not dark”, *whakamarama* “crescent-shaped top of a *kō* (hoe)”. Compare *ara* “awake”. Niger-Congo uses PWS *kia* “become clear, become dawn” for moon and stars. PWN *ŋWAL* “moon” (= *pat* “sun” ?).

***D = R, *A = A** ***M = M, *A = A** ***K = H, *I = I**

MOTH Maori *pēpepe* “moth”, Maori *pepe* “to flutter”, PPN *pepe “butterfly”, (moth), also *pee* “moth”, Fijian *beebee* “ibid”.Mande has *bele-bele* “butterfly”, B *père-père* “butterfly”. The reduplication and *b/p, l/r* alternation in both Polynesian and Niger-Congo are striking evidence for relatedness. Bantu *pap* “flutter”, PWS *pap, pɐ̲p* “wind” show early *a here.

***B = B, *E = E** ***P = P, *R = R**

MOTHER Maori *matua wahine* “parent, female”, *whaea* “mother or aunt”, *kōkā,* “biological mother”, Maori *nānā* “to nurse”, *nā* (of parentage or descent”), Tagalog *iná,ináy* “mother”, Tagalog *nanay* “mother” (term of address), *mamá* “mother”, PPN *matu?a “parent”, PPN *koka “tree”?, PPN *fA?e(a, e) “mother”, Niger-Congo: Koke *ba* “child”, Bantu *biad “give birth”, Bantu *kádi* “woman”, Old Bantu *ka* “woman”, PCS *ko* “woman”, PWS *kì* “woman”, PWS *nà* “mother”. Bantu *kádi* “woman”, Bantu *cati* “tree” are probably the same word. People were identified with trees.

***B = WH, *A = A** ****K = K, *O = O** ***K = K, *A = A**

MOUND Maori *ahu* “mound”, with poles used for divination. Divination involved ancestral spirits. PPN *ahu “pile up”, “altar”, “sacred mound” (sacred places), PPN *aku “scrape out with hands”. The *a-* is a prefix. The *–hu* is from PWS *ku* “dead”, “bone”, also “belly”. Or from PWS *kù* “to dig up”, cf. the Easter Island *ahu,* platforms supporting ancestral images.

***K = H, *U = U**

MOUNTAIN Maori *maunga* “mountain”, *puke* “hill”, *pukepuke* “mound”, PPN *ma?uŋa “mountain”, PPN *puke “mound”, Malay *bukit* “hill”, Tagalog *bundók* “mountain”, Kongo *mongo* “hill”, Poto *mono* “hill”, Ngala *ngongo* “hill”, Bantu *GÒDÒ* “hill”. Possible connection with Kongo *mongo*. Possible connection with PWS *má* “mother” or PWS *mà* “back”, Guang *ga-màl* “back”, Beri *ka-mà* “back”, Adele *gà-má* “back”, Kele *ku-ma-ko* “back”.

***M = M, *A = A** ***(n)G = NG, *A = A ?**

MOURN Maori *taute* “mourn, bring to perfection”, “prepare food for cooking, “look after”, Maori *whakatautau* “wail”, PPN *taku “to recite, mention”, Maori *tao* “to bake”, PWS *tá* “to relate, tell”, *ta* + nasal “to eat”, *ta* “stone”, *tá* “fire”, *ta* + nasal “to finish, to be concerned”. PWN *TÁK, TÁKUN* “chew” . For the *–te* compare Maori *mate* “to die”. Maori funerals included a wake, often with accompanying cannibalism. Malay *mati* “to die”.

***T = T, *A = A** ***K = #, *U = U** ***T = T, *I = E**

MOUTH Maori *māngai, waha,* Maori *ngutu* "mouth" (harbour), "beak", "lip", PPN *ŋutu "beak" etc, PMP *babaq "mouth", PPN *fafa "mouth" (aperture, opening) PWS *bobo* "mute"?, PWS *ka* "open", "bite", PWS *gua* "break", Bantu *mat* "eat", compare Maori *makai* "keep eating portions of food" with *māngai.* Malay has *makan* "eat", Tagalog *bungangà* "mouth". Maori *waha* may be from PWS *nu, nua* "mouth", Agni *nwã,* Zema *nwã, lwã* "mouth", Alagiang, *o-mwa* "mouth" Abure *o-nwa* "mouth", Bulom *nyo-hol* "mouth", Bidjogo *ka-na* "mouth". This word may once have had a labiovelar > Maori *w.*

***M = M, *A = A** ***(n)K = NG, *A = A** ***GW = W, *A = A** ***K = H, * A = A**

NAME Maori *ingoa,* Hawaian *inoa* "name", PPN *hiŋoa "name", Marquesan *ikoa, inoa* "name", East Uvean *higoa* "name", Malay *nama* "name", Tagalog *ngalan* "name", PWS *ni* "name", Ewe *ŋi-ko, ŋ-ko* "name", Bantu *jína* "name", Avatime *li-nyi* "name", Nyangbo *ki-nyi* "name", Ahlo *ì-nyì* "name". The Maori *–a* is probably from an old article. Ngala *nkumbu* "name", Ngombe *kombe* "name" perhaps relevant.

***N = N, *I = #** ***(n)K = NG, *O = O**

NARROW Maori *nipi, ninipi* "small", *riki* "small", *ririki* (pl.), *whāiti* ("small place"), compare Maori *tawhiti* "distant", Tuamotan *tahiti* "distant place", PAB *pî "where?", PWS *bia* "place", (*ba*), Gbari *a-ba* "place", PMP *Dikiq "small", PPN *riki "small", PMP *iTik "small", PPN *iti "small", PNC *ti* "small plural". Tagalog *makitid* "narrow", Malay *tipis, pipih* "thin", Old Bantu *titi, nini* "small", PWS *bí* "child, small", PWS *pi* "small", Gurma *fifi* "small", Djula *fi-tini* "small", Beri *fi-bi* "small", PWS *kì* "woman, small", Poto, Kele *keke* "little", Ngala *–ti* "small", Lolo *–sisi* "small", Swahili *kidogo* "small".

***B = WH, *A = A** ***T = T, *I = I**

NAVEL Maori *pito* "navel", PPN *pito "navel, end of ", PWN *TONT* "navel", Poto *litolu* "navel", Swahili *kitobu* "navel", PWS *tu, tua, (to)* "water", Adele *bu-tu* "water", Lefana *ke-te* "stream", Maori *pito-toto* "blood relation", Swahili *mtoto* "child", PWN *THU, THUA* "waterplace". Water and blood are both liquids. For *pi-* see PWS *bí* "bear child".

***B = B, *I = I** ***T = T, *UA = O**

NEAR *tata, pātata* "near"; PPN * tata "near", PWS *tà* "broad", "even", Edo *a-tata-we* "sole of foot", *a-tata-bo* "palm of hand", Opanda *afu-tata* "sole of foot", Guang *tàtà* "plain", Akpafu *ka-kpa-tata* "sole of foot". The notion is "a palm's, foot's breadth away". Bantu *bamb* "to be close" perhaps explains the *pā* of *pātata.*

***T = T, *A = A**

NECK Maori *kakī,* also *ua* "neck, back of neck", PPN *uaua "vein, artery, tendon, sinew etc" from PWS *kùà* "neck", (Westermann gives Meinhof's Bantu *koti >* kua-ti*). Meeussen has Bantu *kingo* "neck". See Greenberg (1963 : 21), Stewart (2002, No 41). Forms with and without *u/w*. Bantu *kata* "head-pad". Maori often shows a stop where PWS has stop + *u/w.*

***K = #, *U = U, *A = A** ***K = K, *A = A**

NEW Maori *hōu, hou,* "new, recent, fresh", PMP *baqeRu(h) "new", PPN *fo?ou "new", Malay *baharu* "new", Tagalog *bago* "new", Old Bantu *pya,* Bantu *píá,* Bantu *PEA* "new", Soko, Kele *mboli* "new", PWN *PHUA, PHWAI* "new".

***P = H, *UA = O ?** ***B = H, *O = O**

NIGHT Maori *pō,* PPN *pō "night", PWS *pu* "empty, void", *pol* "empty". In Maori *pō* was also used of the Underworld. PPN *popo "decay". Compare Maori *poko* "hole", probably once the same word (hence the long vowel). Mangbetu (Vekens) *bo* "evening" (N-S).

***P = P, *O = O** [Tagbu *'bo'o* "night", Ubangi].

NINE Maori *iwa,* PMP *siwa "nine", PPN *hiwa "nine", Tagalog *siyám* "nine", PWS *gua* "ten", Songhai *i-wa-i* "ten". Gur languages, like Maori, use forms of this word (*a-wa*) for "nine". But a derivation from PWS *búá(k)* "arm" is more likely, Kissi *ba,* Guang *ge-ba* "upper arm", Beri *ke-ba* "shoulder", Okoy *i-buo* "arm". In Maori PWS *b > wh > w.* Palwan (Taiwan) has *siva* "nine".

***B = WH/W, *A = A** **(*GW = W, *A = A)**

NOSE Maori *ihu* "nose" ; PMP *ijuN "nose", PPN *isu, Samoan *isu,* Fijian *ucu* "nose", Rarotongan *puta-i'u , putangi'u* "nose", "nostrils". Malay *hidung* "nose", *menghidu, mencium* "to nose", Tagalog *ilóng* "nose", Bantu *(j)údu, puda* "nose", *pugudu* "nostril", Ngombe *danga* "nose", Swahili *pua* "nose". Clear connection with Rarotongan. The PWS *nwu(a), nyu(a)* has frequent *n = ny,* suggesting an earlier *k or velar. The Maori custom of biting off the nose of victims suggests *ku* "kill" as an etymology.

****K = H, *U = U**

NOT Maori *kā(h)ore, kore,* PPN *koLe "not", PNC *ka* "not", *ka* "hand", Bantu *ka* "hand", Bantu *KÁÁN* "to refuse a request". Sometimes *ka* has *–ra, -ka* following, > Maori *(h)o-re.* The hand was raised as a prohibition. Malay *ta' usah* "don't" (PWS *ta* "hand"). Vekens has *ka* "negative particle" N-S. Maori *ura, uraka* "not", N-C *la* "not". Cf. M. *au(a).*

***K = K, *A = A** ***K = (H), *A = O** ***L = R, *A = E** ***K = #**

OLD Maori *tawhito,* PPN * tafito "ancient", PWS *tá* "finish", with *whi* = PWS *bi* "to be (able)"

***T = T, *A = A** ***B = WH, *I = I** ***T = T, *A = O**

ONE Maori *tahi,* "one", *taki* "rod", PPN *taku "recite", Malay *satu, esa* "one", Tagalog *isá* "one", PWS *ta* "hand, finger", also *ta, tali* "stone" (used for counting). Maori *mea* "one", Bantu *moi* "one", Bantu *MO* "one", Old Bantu *mω* "one", PWN *mot* "one". Vekens *mogo* "unique".

***T = T, *A = A** ***M = M, **A = A?**

OTHER Maori *atu* , PPN *atu "away from speaker", PWS *tù* "approach", "take", both with prefix *a-* to form nouns. Kele has *asi* "other", Ngala, Poto *susu* 'other", Ngombe *tongo* "other". [*t > s].

***T = T, *U = U**

OVEN Maori *umu* "earth oven", Bantu *bú,* "earth", Soko *mbu* "earth", Ngala *mombi* "earth". (or PWS *mu* "in"). Malay *bumi* "earth". Bantu *(j)ungu* "cooking pot". Prefix *mu-*. Probably a nasal grade *m-bu* > *mu.* Also Maori *hāngi* "earth oven", PPN *fAŋa?i "feed", Maori *whāngai* "feed", perhaps compare Bantu *piga* "cooking pot", Swahili *pika* "cook", Ngombe *kalia* "cook". PWS *kà, kàn, kàl* "charcoal", Gbari *te-ka-i* "coal", Efik *u-kang,* Anang *ng-kang* "coal", Swahili *makaa* "charcoal", Bantu *káda* "charcoal". Maori *kā* "burn" (of fire). The Maori suffix is *–ki.* Maori also has a word *kōhua* "Maori oven", "boiler" (PWS *kú, kúá* "kill"). Maori *hāpi* "oven", Bantu *pía* "fire", Swahili *pika* "cook", Kongo *via* "cook". Maori *ahi* "fire" has the fricative grade of the root *pi "cook".

***B = M, *U = U** ***K = H, *A = A** ***K = NG, *I = I** ***P = P, *I = I**
***B = #, *U = U**

PERSON Maori *kōiwi* "bone, corpse, fellow, person, descendants", PWS *kua* "person"/"bone" + *iwi,* (Nama Hottentot *khoi* "person", /Xam (S) *!kwi* "person"). There appear to be a few links between Maori and Khoisan. I regard Khoisan as related distantly to Niger-Congo. PWS *bi* "child, descendant". See *iwi* "bone". The ultimate root here is probably *ku* "kill" > *kubi* "bone" ("dead bones"). Confusion of *kua* "person", *kua* "bone" ? See also Maori *kōhiwi* "skeleton, corpse". Luo (Santandrea) has *kwat* "tribe". "Bone People". The Māori word *kiri* means "skin, bark", but also "person". ("Skin People" ?). And *kikiri* means "begin to grow" (child in womb). Maybe from *ki, Bantu *ke, ce* "cut", Mangbetu *kéképi, képi* "skin". PWS has *gi* "cut", *ge, gel* "skin", Tschi *w'ere* "skin". Fula *guri, guru* "skin". The Mossi call the spirits *kinkir-si* (small genii). If *kin = kini* "little ones", then *kir = kiri* "skins, persons". Māori prenasal loss : *kini-kiri > *kikiri* "persons" (small). See Inboudo (1966 : 66). The *tisé* are *kinkirsi* that reside in trees. Compare Māori belief. PWS *gi* "knife".

****K = K, *UA = O ? *B = W/WH, *I = I ? *K = K, *I = I** ***R = R, *I = I**

PIGEON Maori *kūkū, kūkupa, kererū* "pigeon", *kuaka* "godwit", PPN *kUkU "pigeon", Tualofu *kuku* "bird", PWS *kùkù* "pigeon", Igbo *bwana-kuku* "pigeon".

***K= K, *U = U**

PULL Maori *kukume, tō,* PPN *kume "pull", PPN *toi "pull", PWS *tú(a)* "to take, to draw", Bantu *dut* "to pull", PWS *kù* "to draw water", Igbo *o-kuku* "drawing water", Bantu *kók* "to pull". The final *me* of *kukume* may be "water", PNC liquid prefix *ma-*.

***T = T, *UA = O** ***K = K, *U = U**

RAIN Maori *ua, āwhā* "rain, gale, storm", PPN * ?uha "rain", PPN *afā "storm", Malay *hujan* "rain" (> *ua*), PMP *quZan "rain", Tagalog *ulán* "rain", PWS *gia* "water" (> *ya*); for *āwhā* compare PWS *bà* "swamp", [*b* > *wh* > *w/u*]; PWN *BUDA* "rain", Bantu *búda* "rain". Compare *awa* "river" (prefixed). Maori *ua* perhaps from *BUDA,* with affrication and consonant loss. Maori *āwhā* is from PWS *bà, baba* (reduplicated), with initial *wh* > *#.*

***B = #, *U =U** ***B = WH, *A = A**

RAT Maori *kiore* "rat". The word is related to Maori *kurī* "dog", PWS *ku* "stomach", with the form *kuri* used to mean not only "belly" (Kwa), but "rat" (TogoR), "cow" (Chad) etc. Maori *kurī* is used for various quadrupeds. The Maori form *kiore* is from diminutive prefix *ki-* + *kuri* > *kiore* (loss of repeated *k, u* > *o, i* > *e*).

***K = K, *I = I** ***K = #, *U = O** ***R = R, *I = E**

RED Maori *whero,* PPN * feLo "red" (yellowish), Malay *merah* "red", Tagalog *pulá* "red", Bantu *piu* "red", *boda* "red". See Gleason (1961: 4-5) on colours, and compare the Greek expression "wine- dark sea" (*oinopa ponton*).

***B = WH, *I = E** ***L = R, *A = O**

RIGHT HAND Maori *matau* "right side", "hook", PMP *taquh "right hand", PPN *mata?u "right", PWS *m-ba* "hand" + PWS *ta* "hand", also "take", "customary". Possibly *–u = wu, ku* "kill" ?

***(m)B = M, *A = A** ***T = T, *A = A**

RIVER Maori *awa* "stream", PPN **awa* "channel", Easter Island *aba* "passage", PWS *bà* "swamp", PWS *pat* "swamp, mud", Bangi, Lolo, Ngala, Poto *mbula* "rain", Ngombe *mbua* "rain", Swahili *mvua* "rain", Bantu *BUDA* "rain". Loss of *u* after a plosive. Malay *air* "water". Maori *manga* "stream", PPN *mana "branch" (of river), Bangi etc. *mai* "water".

***B = W/WH, *A = A** ***M = M, *A = A** ***N = N, *A = A**

ROAD Maori *ara,* PPN *hala (Elbert) "road", PMP *Zalan "road", Malay *jalan* "road", Tagalog *daán* "road", Bantu *jidá* "road", Urbantu (Meinhof) *ɣila, i-ngila* "road", compare Meinhof's Bantu *ɣia* "to go", Ga *ya* "to go", Djuku *ya* "to go", Kulango *ya* "to go", Kpelle *ya* "to go" etc. PWS *gia* [*ghwya] "to go", with *n* + *gi* > *r*. Malay *jalan* "road" shows Maori has lost initial *j* and (final *n*). Herero *o-ndjira* 'road" Poto *njela* "road", Swahili *njia* "road". Maori, like Malay, has applied vowel harmony [*a-a*] to this word. [Basque *joan* "go"].

****GHWY = #, *A = A** ***L = R, *A = A**

ROOT Maori *pakiaka, paiaka, aruhe* "fern root", PMP *aka(r) "root", PPN *aka "root", Ngala *nkanga* "root", Bangi *lokanga* "root", Poto *nchina* "root" Lolo *wiji* "root". PWS *pá* means "bush". There is an old word for "wood" (Ngombe *esika* "forest"), PWS *ka* "cut, hew", Guang *káká* "to cut in pieces", Igbo *ka* "to carve", Swahili *kata* "to carve", from PWS *ka* " hand", Malay *akar* "root", but Tagalog *ugát* "root".

***L = R, *U = U** ***K = K, *A = A**

ROPE (TIE) Maori *taura* "rope". Maori *iri* "hang, be suspended", PPN *iLi "rest on something", Bini *iri* "rope", PNC **li* "rope", Yoruba *so* < *sa* < *ta* "tie" from *ta* "hand" > *sa* "action of hand", "tie". PPN *sa?i "bind" (from PWS *ta* "hand", "tie"). Malay *tali* "rope, tie".

***L = R, * I = I** **(*T = T, *A = A) ?**

ROTTEN Maori *pirau, popo* "rotten", *paru* "dirt", PMP *bekbek "rotten", PPN *pilau "decayed", PPN *popo "decay", Nukuoro *bobo* "rotten", Malay *busuk* "rotten", Tagalog *bulók* "rotten", *sirâ* "rotten", PWS *(m)-bin* "dung, excrement etc", Nki *a-buŋ* "excrement", Ekoi *a-buŋ* "excrement", Atjulo *beŋ* "dirt", PWS *(m)-bu* "bug" (with nasal prefix), Bantu *bund* "rot", *bod* "decay", *bindu* "dirt", *bíi* "dung", PWN *PÓT* "become rotten". The original consonant is *b, but the vowels vary: *a, i, u,(o),(e).*

***B = P, *I = I** ***B = P, *O = O**

ROUND Maori *porotaka, porowhita* "circle", *poroporo* "bracelet", PPN *po(e,i) "rounded, make into a ball", Maori *poi* "make into a ball", Malay *bola* "ball", Tagalog *bola* "ball", PWS *ka* "ring", Bantu *kata* "ring" (reversed), PWS *bí* "drum", often with a following *t* or *a*. Bantu *bada* "circle, ring" accounts for Maori *po, ro* [*a* > *o*]. For Maori *poi* "type of ball" compare Bantu *pida* "rubber ball", also PWS *pa(i)* "to be full".

***B = P, *A = O** ***K = K, *A = A** ***B = WH, *I = I**

RUB Maori *miri,* PPN *mili "massage", PWS *mí* "to press, squeeze"? (of the nose)

***M = M, *I = I**

SAIL Maori *rā* "sail", PPN *lā "sail", PMP *layaR "sail", Nilo-Saharan : Merarit *la* "to go", Tama, Dinka, Masai *lo* "to go". Malay *layar* "sail". Compare Malay *jalan* "road", Tagalog *layag* "sail", Maori *ara* "road". The element *ya* is "go" in Niger-Congo, PWS *gia* "go" > *ya.* The Fordatan language (Tanimbar, Moluccas) uses *laar* for "sail", *raa* for a "dugout sailing canoe with outriggers" (Barbier & Newton eds. 1998 : 169, McKinnon).

***L = R. *A = A**

SALT Maori *wai tai* "sea water". See "Sea". Malay *asin* "salt", Tagalog *asín* "salt", PNC *to* "salt", Mumuye *tã* "salt", Proto-Bantu **ta* "saliva".

***T = T, *O = O (**A)**

SAND Maori *onepū, kirikiri, tāhoru,* Bantu *ceke* "sand"?, PPN *kilikili "gravel", Bantu *cengi* "sand", PWN *KHEKE* "sand", *KH(Y)AN* "sand". The word *onepū* is from the word for "dust", Bantu *bu* "earth", Malay *bumi,* Tagalog *buhangin* "sand". The word *kirikiri* is a reduplication of the word for "small" *ki* with a plural suffix. I connect *tāhoru* with PWS *la, (da),* "earth", "under".

***B = P, *U = U** ***K = K, *I = I** ***D = T, *A = A**

SAY Maori *kōrero* "say", *karakia* "spell", *karanga* "call out", *kare* "term of address", *karere* "messenger", *ra, rā* "I pray you", *reo* [< *rero, arero* "tongue"] "voice, speech", PPN *kalaŋa "call out", Maori *nanu* "murmur", PPN *nanu "speak indistinctly", Malay *katakata* "say", Tagalog *wikain* "say", PWS *ká, kán* "speak", (PWS *guè* "voice", (Khoisan) Sandawe *ga,* !O !Kung (N) *ka,* Nama Hottentot (C) *gawa, gowa,* /Xam (S) *ka* "say"). Maori *kō* is used of birds singing, but also of shouting, Maori *koā* means "indeed" ("say"?). This important word goes back to a time when voiced & voiceless stops were not distinguished. There is a clear link with Khoisan here. Maori *nanu* from PWS *nu, (na)* "mouth". Maori *ui* "enquire" < PWS *guè* "voice" [*gwi], Ga *gbē* "voice", Ewe *gbè* "voice" . [Latin *inquit* "says"].

***K = K, *A = A** ***N = N, *A = A ; *U = U** ***GW = U (W), **I = I**

SAY Māori *kī, kīkī* "say, speak" appears older than *ka (above). Like *ka, *ki is an old word for "hand". Bangi *likingo,* Kele *limiki* "voice", PWN *KIT* "refuse", PWS *kì* "abstain", Senufo *k'i* "refuse", but general Mande has *ku-ma, kā* "speech". So grades *i, u, a* of the vowel are represented (in the "same" root). Nilo-Saharan (Chari-Nile) has Mahas *i: ,* Old Nubian *i:* "say", but also Zaghawa *oi* "speak", Daza *io* "tell", with Kenuzi *we, e,* Dongola, Dair, Nuer *we* "say", Fur *u* "say". So the variation goes back a long way. The labiovelar of PWN *GWÌM* "deny, refuse, sing" etc is secondary [*p > w]. PPN *kio "cry of birds", Bantu *kem* "cry, call".

***K = K, *I = I** [PWN *BIL* "call" (birds)].

SEA Maori *moana, tai*, PPN *moana "sea", Easter Is. *moana* "blue", Malay *pantai* "shore", PPN *tahi "sea", Fijian *taci, tai* "seacoast", PNC *ma* "liquid prefix", PWS *tà* "possession", Temne *tai* "thing", *ta* "to dwell", Bantu *tái* "saliva", PWS *(m)ba* "salt", Yala *o- ma* "salt", Djuku *ma* "salt", Avatime *ku-mo-e* "salt", Nyangbo *ke-mo-e* "salt".

***M = M, *O = O** ***T = T, *A = A**

SEE Maori *kite* "see, perceive, know, understand, discover", PPN *kite "see, appear, know", Easter Island *kite* "see", *tike* "see", (Fijian *kida* "dawn"), Tagalog *makita* "to see", PWS *kià* "to dawn, become light, visible", Common Bantu (Stewart) *ki* "to dawn", old Root *ki* "see", Eastern Sudanic *ki*. Nalu (Atlantic) has *kyet, cet* "eye" (Sapir in Sebeok 1971 : 51), Djola, Pepel (Atlantic, Westermann) have *–kil* "eye". Afro-Asiatic for "eye" is *(y)id.* Nilo-Saharan : Fur *agil,* Koma *gil* "see" (Greenberg); Chari-Nile ; Longarim *gini,* Dilling *gel,* Nandi *kere* "see" (Greenberg). Bantu *ki, kí,ge* "eyelash". My hypothesis here is that an old root for "see", was used with PWS *ta* 'hand, take" to express perception (seeing etc) in Maori. Maori also has *mātau* "know" from PWS *mua* "take", compare Bantu *MO,N* "see", *vid.* EYE.

***K = K, *I = I** ***T = T, *A = A**

SEED Maori *purapura, kōpura, kākano*, PPN *pua "flower", Fijian *bua* "flower", Tagalog *binhî* "seed", *butó* "seed", PWS *pu* "to appear", PWS *pú(l)* "bush, field". I consider *pura* and *pua* are related. Malay *bunga* "flower", but *biji* "seed", *běneh* "seed". PWS *pita* "leaf" ?

***P = P, *U = U**

SEVEN Maori *whitu* < (Bantu *–tu* is attached to *tanda-tu* "six"); *-tu* means "take away", PMP *pitu "seven", Tagalog *pitó* "seven", PWS *bi* "a little"(subtractive numbers) from "ten". Such subtractive numerals occur in Africa. Atayal *pitu'* "seven" is the same as the Maori. Banjar *pitu* "seven", Iban *tujoh* "seven". PPN *fitu "seven", Fijian *vitu* "seven".

***B = WH, *I = I** ***T = T, *U = U**

SEW Maori *tui, tuitui* "sew", PPN *tui "sew", Bantu *túm* "sew", PWS *tum* "to work", *tù* "to push", PWN *TÚIM* "work". Tagalog *tumahî* "sew". Maori *patui* "needle" (n. prefixed). Kongo has *tunga* "sew", *ntumbu* "needle". I suggest a root *tuki, assuming a CVCVCV structure. Maori has *tuki* "to push", *tuhi* "to decorate" etc. Efik *tuk* "to push". Cf PWS *kin(i)* "needle" however.

***T = T, *U = U** ***K = #, *I = I**

SHARP Maori *koi, rata* "sharp", PPN *koi "sharp", Malay *galak* "sharp", PWS *ká* "cut", PWS *tè* "cut", Bantu *tand* "cut", Bantu *kant* "cut". The word comes from "hand", *ka, ta.* PWS *COK* "prick with point", *CON* "be pointed", *CO, COT* "pierce". PPN *hau "needle", Maori *au* "mat pin", Fijian *i/sau* "sail making needle" (with *t* > *s*).

***K = K, *A = O** ***T = T, *A = A** ***T = #, *A = A**

SHORT Maori *popoto, hakahaka*, PPN *poto "short", Malay *pendek* "short", Tagalog *pandák* "short", Soko *boufu* "short". Possibly from PWS *bua* "hand"(measurement, "two hands" etc).

***B = P, *UA = O** ***K = H, *A = A** ***K = K, *A = A**

SING Maori *waiata* "sing", *tau* "song", *wā* "accuse", *wawā* "make a loud rumbling noise"; PWS *guè* "voice, loud cry" from **gwa* > *wa.* PWN *GWAM* "speak", Kongo *vova* "speak", Kele *onga* "speak". The *ta* of *tau* is PWS *tá* "say, tell". Reflexes with *o* suggest *ua, au.*

***B = W, *A = A** ***T = T, *A = A**

SINGING Maori *iere* "singing", Malay *menyanyi* "sing", PWN *JO, JOL* "dance", Kongo *kina* "dance", Poto, Kele *ina* "dance", Bangi, Ngala *yemba* 'sing", Poto, Ngombe *emba* "sing", Bantu *jímb* "sing", PWS *giò* "to dance", with reflexes *džò, gio* (Yoruba). Also PWS *gí, gía* [*ghwya] "to speak".

***GHWY = I/Y, *E = E**

SIT (down) Maori *noho,* PPN *nofo "sit, dwell", Tagalog *umupô* "sit", PWS *na* "upon", Ga *no* "upon", Grebo *no* "upon", Igbo *na* "upon" + PWS *kà* "remain" (with vowel harmony ?).

***N = N, *A = O** ***K = H, *A = O**

SKIN Maori *ewe* "afterbirth", (PPN) *ewe "afterbirth", Tagalog *kuwero* "skin", Malay *kulit* "skin", PWS *ge* (*ghw) "skin", "cast off snakeskin" > *we.* Moriori *teewe* "womb".

***GHW = W, *E = E**

SKULL Maori *angānga* (*angaanga* Reed) "head, skull", Tagalog *bungô* "skull", Bangi, Ngala, Poto, Kele *bongongo* "brain", Lolo *wongongo* "brain" [*a* > *o*]. Maori *anganga* "aspect". Vekens *ngo* "face", *ngongo* "to one's face".

***B = #, *A = A**

SKY Maori *rangi* "sky", Tagalog *langit* "sky", Malay *langit* "sky", PWS *la* "day", also *d.a* "day", with PWS *gi* "air, atmosphere", Bantu *gudu* "sky". Polynesian *rangi, raki* refers to the "weather". Vekens *ro* "sky".

***L = R, *A = A** ***(n)G = NG, *I = I**

SLEEP Maori *moe,* PPN *mohe "to sleep", Fijian *moce* "to sleep". Malay *tidor* "sleep", Tagalog *tulog* "sleep", Bantu *dóo* "sleep", *dóot* "dream", *jodi* "dream", Swahili *ndoto* "a dream", Kongo *ndoji* "a dream", Lolo *jidoto* "a dream", Swahili *ota* 'to dream", Kongo *lota* "to dream", PCS d*V* "sleep', PAB ***d**a "sleep", PWS *la* "to sleep". But probably a nasal grade of *pō* "night". Or a nasal grade of *pohe* "blind, dead" (sleep = death). See "blind". Also *pō* "night", Leenhardt has *mo* "night" alongside *boe* etc. Maori *inapō* "last night". The phonetics rules out a derivation from *do. Vekens has *bo* "evening", *bodi* "black".

***m(P) = M, *O = O**

SMALL Maori *iti* "small", *riki* "small", PPN *iti "small", PPN *liki "small", PNC *ti-* "small" plural prefix, Heiban *itiny* "small". PWN *TITUA, TIN* "small", Ngala *–ti* "small", Lolo *–sisi* "small", PWS *ki* "woman" (small woman), PWN *KEKE, KEN* "small", Bangi *–ke*, Kongo *–akete,* Poto, Kelle, *keke* "small", Ngombe *kekeke* "small", Soko *hekeheke* "small". On Easter Island *riki* is plural of *iti*, compare Maori *tamaiti* "child", *tamariki* "children". The *ri* of *riki* is the same as Bantu prefixes 8x pl *li-,* and 10 pl *li-ne* (Welmers 1973 : 165). But the formant is postposed in Maori, just as *–ti, -sisi* are postposed in Ngala and Lolo.

***T = T, *I = I** ***L = R, *I = I** ***K = K, *I = I**

SMOKE Maori *paoa, auahi* "smoke", PMP *qasu(h) "smoke", PPN *'ahu "smoke", Hawaiian *au-ahi* "smoke", (compare PPN *paŋo "black"), Malay *asap* "smoke", Tagalog *asó, usok* "smoke", PWN *ŊWÁKÌ* "smoke", *ŊWÁTÌ* "smoke", Bantu *YÓKÌ* "smoke"; the Maori *aua* corresponds to PWN *ŊWA* just as Maori *paoa* corresponds to the same, but with a prefix *pa-*. This prefix probably occurs in Lolo and Kele as *bo-,* which is attached to the words for "smoke" in those languages. Maori *hi* corresponds to Bantu *KI* . Maori phonetic doublets. In Mangbetu *oki* means "grill, roast" (on open fire). PWS *kia* "to dawn" (sunrise ; sun = fire).

***B = W, *A = A** ***B = P, *A = A** ***K = H, *I = I**

SOME Maori *he,*Tagalog *kauntî* "some", PWS *ka* "beast, flesh" (Niger-Congo prefix *ka-, he-*). See Welmers (1973 : 165) Bantu prefix 7 sg *ke-, se-, e-.*

***K = H, *A = E**

SOON/STRAIGHT AWAY Maori *tata* "soon", PPN *tata "near", PWS *tè(tè)* "soon, straightway, erect". An origin in PWS *tà, tàtà* "level, even" also "sole of foot, palm of hand." is probable.

***T = T, *A = A**

SPEAR (n) Maori *huata, tao, matarau, kōkiri* "spear", PPN *tao "spear", (for *matarau* compare PPN *matau "axe"), PWS *tá* "shoot arrow, bow" ; PWS *búá* "arm", or PWS *kú, kúá* (> *ko*) "kill", byform *ki* "death". The Maori *ma-* is "finish", "kill". Malay *tombak* "spear".

***T = T, *A = A** ***K = K, *UA = O** ***K = H, *U = U** ***K = K, *I = I**

***M = M, *A = A**

SPIT (v) Maori *tuwha, tuha* "to spit", PPN *tufa "spit", Bantu *tu* "spit", PWS *tú* "spit", PWN *TÚPH* "spit", Adele *tu-ma* "spit", (Temne, Wolof *tuf* "to spit", Also Nilo-Saharan : Haussa *tōfa* "to spit").

***T = T, *U = U** **(*B = WH, *A = A)**

SPIRIT, GOD, DEMON, OMEN Maori *atua* "god, demon, ghost", *aituā* "omen", Raro. M. *aitu* "god, demi-god, spirit", PPN *aitu "ghost, spirits" (= dead ancestors), Malay *hantu* "ghost, evil spirit". Compare Bantu *bantu* "men", *tu* "head", *twa* "pygmy, dwarf", PWN *NINTU, NITU* "man". Bantu *vatua* means "dwarves", "bushmen" (Johnston 1922). Raro. *Aitu* "eastern tribes", destroyed and eaten at Aitutaki (< *batitu-, *banitu- ?). [Malay *anu* "so and so" < *bantu.* Hittite *antuhsa-* "man" is related, also with *b*-loss. The *–sa* < *ka* ; hence *-a*].

***B = #, *A = A** ***N = #, *T = T, *U= U** ***T/K (s = h) = #, *A = A**

SPLIT Maori *wāwahi, wāhia, wae, waewae* "divide", PPN *wahe "divide", PWS *guà* "to cut, divide", Temne *gba-i* "to break, split", *gba-s-ki* "to divide", Bulom *gba-si* "divide".

***GW = W, *A = A** ***K = H, *I = I**

SPRING Maori *puna* “spring of water”, “food source” (oven), PPN *puna “spring”. TogoR *li-fune “hole”. PWS *bùà* “hole”, PWN *BHO* “be wet”, *BUDA* “rain”, *NABH* “wash”.

***P = P, *U = U** *N = N, *A = A (or *na demonstrative) [Luo *naam* “river”]

SQUEEZE Maori *roromi* “squeeze”, PPN *mili “massage”, Tagalog *pumisíl* “squeeze”, Bantu *min* “to squeeze”, PWS *mí* “to squeeze”, PWN *MÌN* “squeeze”; Maori *roro* refers to sticks rubbed together to make fire. This word is from PWS *luá* “tree, wood”, with reflexes I *da, dua,* IV *da, do* > Maori *ro.*

***M = M, *I = I** ***D = R, *UA = O**

STAB Maori *oka, wero,* PPN *hoka “stab, pierce”, PPN *welo “thrust”, Tagalog *tarakan* “to stab”, PWS *ka* “hand, cut”, *ká* “cut, bite”, PWS *guà* “to cut”, Gola *gwe* “to break”.

***K = K, *A = A** ***GW = W, *A = E**

STACK Maori *pū* “bunch, heap, stack”, “tribe”, PPN *puku “protruberance”, PWN *pu* “stomach”, PWS *pú* “foetus”, PWN *PÚT* “stomach”, Malay *pĕrut* “stomach”, Maori *pute* “basket”, Maori *puke* “hill”, PWN *BHOM* “bundle”, Maori *pūranga* “heap”, PWS *po* “person, seed”, Maori *poho* “abdomen”. The primary root is *pu* “stomach”.

***P = P, *U = U** ***P = P, *U = O**

STAND (UP) Maori *tū,* “stand up”, PMP *(t)uquD “stand”, PPN *tu’ul-aki “stand”, Malay *turun* “descend”, Fijian *tu* “to stand”, Samoan *tu* “to stand, to stand up, to arise”, PWS *tú* “to migrate”, Yoruba *tú* “to break up, (as market or congregation)”, Susu *tunu* “déloger”, PWN *TUL* “go down”, Bantu *tu(u)duk* “descend”.

***T = T, *U = U**

STAR Maori *whetū,* PMP *bituqen "star", PPN *fetu?u "star", Hawaian *hokū* "star", Tagalog *bituín* "star", Malay *bintang* "star", PWN *pian* "moon", Kya *pe* "moon", Mussu *pia* "moon", Igbara *u-fe* "moon", Avatime *ko-wente* "moon", Likpe *ko-fande* "moon", Songhai *handu* "moon" (same root used for "moon" and "stars"). PWN *PEM* "shine", *PÌAL* "moon", *PÌAN* "moon", Lolo *weji* "moon", Swahili *mwezi* "moon", Lolo *boci* "star". Stars were also called *rā ririki* "little suns". Bantu *jubá* "sun", PWS *pat* "sun", Limba *fato* "day". The underlying meaning is "shine". Tagalog *talà* "star".

***B = WH, *IA = E**

STICK (n) Maori *rākau , taki* "a rod", *tītī tourea, tī rākau* "stick games". PPN *lala "tree", PPN *Laka "sacred", Tuamotu *raka* "a sacred tree", PWS *tí, tú* "tree, wood". PWS *duá* "tree", also PNC *ka* "wood, carve". Compare Maori *tūtū* "tree at which birds are snared", (and *tupuna, tipuna* "ancestor", ancestors lived in trees, possibly also *tupua, tipua* "goblin, demon").Tagalog *kahoy* "stick", Malay *tongkat* "stick". Old verb *tī* "throw"(noun, action of).

***T = T, *I = I ; *U = U** ***D = R, *A = A** ***K = K, *A = A**

STONE Maori *kōwhatu, pōwhatu* "stone",PPN *fatu "stone", Rarotongan *patu* "stone wall", Tagalog *bató* "stone", Malay *batu* "stone", Bantu *bue* "stone", *BOE* "stone", compare Bantu *bad* "count" PWS *bà* "to count", Igbo *bwa* "to count", Efik *bat* "to count" (counting with stones). This word occurs with two different prefixes. Compare Bangi, Ngala *libwa* "stone" with prefix *li-*. The word for "hand" in Niger-Congo *búá* is probably relevant. Niger-Congo also has *ta* "hand, stone". Maori *toka* means "rock", (PPN) *toka "rock", *kāmaka* "rock", compare PWS *kà* "charcoal" (*ka* "hand").

***B = WH, *A = A** ***T = T, * U = ?** ***K = K, *A = A**

STORM Maori *tūpuhi* "storm", PPN *puke "flood", Maori *waipuke* "flood", PWS *pú* "foam" *pú* "to blow", Maori *pupuhi* "to blow", *apu* "gust of wind", Grebo *hu-i* "blow the fire", *hu-wi* "to blow strongly", Tobote *pu-fe, pu-he* "to blow", Malay *bueh* "foam on waves", PWS *tù* "to knock, strike, push".

***T = T, *U = U** ***P = P, *U = U** ***K = H or *P = H, *I = E**

STRAIGHT *tōtika, tika* (without prefix), (PPN) *tika* "dart", *tika* "right", Tagalog *matuwíd* "straight", Bantu *dung* "to put straight", Bantu *DODAM* "become straight", PWS *tè* "straight".

***D = T, *O = O** ***D = T?**

STREAM Maori *ia* "stream, current", PWS *gi, gia* [*ghwya] "water", II Akwa *a-ya* "river", III Bowili *ko-ya* "stream", VI Kpelle *ya* "water", Mende *yia* "water", Bantu *jíjí* "water", Soko *haiye* "water", Kele *liyandi* "river". Probably from PWS *gi, gia* "to go" > *ya* etc. PWN *NIA* "rain" has the nasal grade seen in Swahili *nya* "rain". Malay *kali* "river", Malay *kapal* "water", Bantu (Meinhof) *γi, γiγi, keγi* "water", Bantu (Meussen) *jíji* "water", PWN *JAB* "cross a river". The word for "water, stream" is related to the word for "go", PWS *gi, gia* "gehen". People travelled by canoe. Bantu *gi* "go", *k(a)* "go", PWN *GWÌA* "go". A lenis labiovelar is the original sound. Vekens *é guô* "water".

***GHWY = I/Y, *A = A**

STRUCK Maori *pā* , PPN *pā "strike", also *pao* "stake" , *pakuru* "broken", Malay *pukulan* "strike", PWS *puà* "to strike", PWS *búá, ba* "arm", with Maori *whara* "struck", *whati* "broken". Old Maori "Neuter Verbs". [*ua* > *a(u)* ?]. PAB ***p**ati "hold".

***P = P, *A = A** ***B = WH, *A = A**

SUCK Maori *ngote, momi* "suck", PMP *inum "drink", PPN *miti "suck", PWS *mì* "to suck", Gio *mu* "to drink", Temne *mun* "to drink", Bantu *mun* "to suck". Bantu *jónk* 'to suck". Compare "drink", Malay *minuman* "drink".

***M = M, *U = O** ***M = M, *I = I** ***(n)K = NG, *U = O ?**

SUMMIT Maori *tihi* "summit", "top knot of hair", PPN *tihi "tip", "point", PWS *ti* "head", *tikitiki* "topknot", *tiketike* "height, high", PPN *tike "lofty, elevated".

***T = T, *I = I** ***K = H, *I = E**

SUN Maori *rā* “sun, day”, PMP *qa(ny)jaw “day”, Malay *hari* “day”, Tagalog *araw* “sun” PWS *la* “day”, Ga *d.ā* “day”, Tschi *e-d.a* “day”, Dagomba *dā* “day”, Kussasi *da-ba* “day”, Djula *la* “day”, Gio *de* “day”, Gola *ke-d.ua* “day”, Animere *dā* “always”. Compare PWS *gui*, *guia* “sun”, I Bassa *giro* “sun”, Indiki *o-ya* “day”, Tem *we-re* “sun”, Bago *yí-re* “day”, Gola *e-gwē* “sun”, Bantu *júba* “sun”, Bantu (Meinhof) *yuva* “sun”. The Maori initial *r* (seen also in Egyptian) is probably from a nasal grade of a lenis labiovelar, PWN *GHWIN* “sun”, Ogoni *gbei* “sun”, Ufia *rigwe* “sun”, Ewe *ghe* “sun”, Fon *hue* “sun”, Gola *egwe* “sun”. Compare *Songhai, Sonrai,* with *n-g* > *r*. This phonetic development *ghw* > *r* is regarded as unusual. See Delafosse & Caquot (in Meillet-Cohen 1952 II: 812).

***D = R, *Ā = Ā**

SWAMP Maori *mata* “swamp”, *mata* “surface”, PPN *tafe “flow”, Maori *tahe* “current”, *mamaha, maha* “stream”, *mamaoa* “stream”, Bantu *ma-* “liquid”, Bangi, Ngala, Poto *mai* “water”, PWS *ta* “to sit” or PWS *tà* “level, spread out”, or better PWS *ta* “to go”, Bantu *tamba* “to go”. In Malay *mata* is used for the “blade of a knife”; *mata ayer* “spring of water”.

***M = M, *A = A** ***T = T, *A = A**

SWELL (v) Maori *puku, pupuhi,* PPN *puku “protruberance”, PWS *pu* “stomach”, PWS *pú* “embyro”, Swahili *fura* “swell”.

***P = P, *U = U**

SWIM Maori *kau, kauhoe, kautāhoe* “swim”, PPN *kau “swim”, Bantu *kac* “swim”, PWS *gual* “to wash”, PWS *gua* “hand”, PWS *ka* “hand”. Cf. Bantu *kapi* “oar” (little hand), Maori *hoea* “oar” (with *–a* article), *hoe* “to paddle”. Maori canoes were paddled, not rowed.

***K = K, *A = A** ***K = H, *A = O**

TAIL/BUTTOCKS Maori *remu, kōtore,* PPN *lemu "buttocks", Malay *ekor* "tail", Tagalog *buntót* "tail", PWS *lu(a)* "tail", Tschi *e-dua* "tail", Guang *o-du* "tail", *obo-lua* "cow's tail", Yoruba *ì-ru* "tail", Igbo *ó-dọ̀* "tail". An original *d in the root. Bangi *bokoto* "buttocks".

***D = T, *UA = O**

TEN Maori *tekau* or *ngahuru.* PMP *puluq "ten", PPN *aN-fulu "ten" (10 days). Malay *puluh* "ten". Tagalog *sampû* "ten". The word *ngahuru* has the plural article + PWN *PU* "finish" of "finishing both hands". Compare the expression "Mande – Fu" (Mande – "Ten"). For *tekau* "ten" compare Ewe *a-síd.èké* "hand one", literally "remain one (from) hands", that is "nine". PWS *ka* means "hand, arm". See Westermann (1930 : 98, 99). Malay (Jakarta) *sa-pulu,* Banjar *sa-puluh,* Iban *sa-puloh* "ten", matches *nga-huru = nga-pulu.* Maori *ru = lu* "two" (hands). Pratt identifies *puluh* as "feathers". Mande *fu* "ten", Maori *pū* "pair".

***K = H, *U = U** ***K = K, *A = A** ***D = T, *E = E**

THAT Maori *tēnā, tērā,* PPN *nA "there", Malay *di sana, ke sana* "there", Tagalog *na* "that" (conjunction), PWS *na, la* "that". An "article" precedes in Maori.

***N = N, *A = A** ***L = R, *A = A**

THERE Maori *ana* "there", PPN *nA "there, near addressee", Maori *na* "there", PWS *na* "this", Nupe *a-na* "this", Tafi *na* "here", IV Bamana *na* "here". Compare "that". TOWARDS.

***N = N, *A = A**

THEY *rāua* “they (dual)”, *rātou* “they”, (PPN) *LA “there”, Maori *rā* “there”, Malay *dia* “they”, Tagalog *silá* “they” (nominative), PWS *la* “that” (for agents in Mande).

***L = R, *A = A**

THINK Maori *whakāro, maharatia, mea,* PPN *me?a “thing”?, Tumale (Kordofanian) *aiman* “to think”, Ngala, Poto *manya,* Ngombe *mana* “to think”. Bantu *gan* “to know” indicates a possible nasal grade : *n-gan.* Root *ka, gwa* “say”. Vekens *amba* “think”.

***M = M, *A = A** ***K = K, *A = A** ***K = H, *A = A**

THIS Maori *tēnei* “this”, PPN *nei “here, near speaker”, Maori *nei* “here etc.”, Malay *sini* “here”, Indonesian *kesini* “this way”, PWS *ni* “this”, with “article”.

***N = N, *I = EI ?**

THOU Maori *koe* “thou”; PPN *koe “thou”, PWS *ku* “companion”, Bantu *gwe, hu, ho* “thou, thee, thy” (Johnston 1911). Torrend’s (1891 : 153) comparative table of connective pronouns consistently has *ku,*(*u, go, o*) for the second person singular.

***K = K, *U = O**?

THREE Maori *toru* “three”, PMP *telu(h) “three”, PPN *tolu “three”, Malay *tiga* “three”, Tagalog *tatló* “three”, Bantu *tátu,* from *ta* “one” + *ru(a)* “two” (Malay *dua* “two”) . For Maori *to-* compare Ewe *tà, tò* “thing”, Guang *a-tò* “thing”. For *dua* “two” compare PWS *bà* “two”, Nupe *gu-bà* “two”, but V Djola *lu-ba* “two” (loss of *b*).

***T = T, *A = O** ***D = R, *U = U**

THROW Maori *maka, panga, whiu,* "throw", PPN *maka "throw, sling, stone", PMP *batu "stone", PPN *fatu "stone" Tagalog *ibató* "throw", PWS *pi, pu* "throw". Maori *maka* is from PWS *ka* "hand", as is *panga* (PWS *ba* "hand", *ka* "hand"). Maori *whiu* from PWS *pi*

(*p* > *b*).

***P = P, *I = I** ***B = P, *A = A** ***K = K, *A = A**

THUMB Maori *kōnui* "thumb, big toe", also unit of measurement (2cm). PWS *nú* "hand", Lefana *ko-nú* "hand", Likpe *ko-ní* "hand, arm". Togo Remnant (Heine 1968) has *ku-núe "arm, hand". *Konui* also means "big toe". Nelson Maori *koromatua* "thumb" (Beattie).

***K = K, *O = O** ***N = N, *U = U**

TIE (v) Maori *here* "tie", "string or cord", PPN *sele "snare" (+ "tie"), Fijian *sere* "untie", PPN *sa?i "bind", Marquesan *he?e* "tie", PPN *sa?o "draw a net around". (PPN) *soko "join" (tie), Fijian *coko* "tie". The vowels *e,a,o* indicate original *a in these words. PPN *sele also means "cut, knife". PMP *ke(t)ip "cut", PPN *koti "cut". Malay *tali* "tie", Tagalog *talian* "tie". Words for "tie" and "cut" may be the same or similar: Bantu *kat, kant* "cut", *gang* "tie up", Kongo, Bangi, Ngala *kanga* "tie", Lolo, Poto, Ngombe, Kele *kanda* "tie", Swahili *kata* "cut", PWN *KHANT* "cut". The reason is that both "cut" and "tie" are actions of the hand, PWS *ka* "hand". Yoruba *so* "tie" is from **sa* < **ka,* compare Linear A *SA* "tie". PNC *k > s > h > # (in Maori). Kongo, Ngombe *sasa* "carve", Bangi, Ngala, Poto *sese* "carve". Allophones of *k variously give Maori *k, h, #.*

***K = H, *A = E**

TOE Māori *korokoro* "finger, toe", *toi* "point, summit, finger, toe", Bantu *tu* "head", PWS *tú, tí* "tree". English *toe* < AS *tā* (< *tāhe*), PPN *toe "remainder", MQA *to(?)e* "ibid". *CVCV.

***T/D = T, *U = O** [PWS *dó* "one"] [Swahili *kidole* "finger, toe"]

TONGUE Maori *arero, reo* "tongue", Hawaiian *alelo, elelo* "tongue", PWS *lima* "tongue", Bantu *dima* "tongue", Edo *e-reme* "tongue", Igbo, Nupe *íré* "tongue", Igbira *irarè* "tongue", Igede *eléle* "tongue", Bini *ár.áb.è* "tongue", Fula d*emde* "tongue", Mande *nè, nè-ne* "tongue", *nè-nde* "tip of tongue", Gur *ded'm* "tongue" (with implosive *d'*). Soko, Kele *lolame* "tongue", Ngombe *yeme* "tongue". Maori *arero* clearly belongs here. There are a number of problems associated with this word. "Tongue" is connected with PWS *lì, lià* "eat", Igbo *a-ri* "food", also PWS *lum* "bite" etc. The range of phonetic variation is considerable (from Efik *e-deme* to Mfut *de-rim,* from Gurma *bu-lambu* to Tobote *le-limbi-ri*) and defies the setting up of "regular sound correspondences". Malay *lidah, lisan* "tongue", Tagalog *dilà* "tongue". The word *reo* "tongue, speech" is a reduction of *arero.* PPN *le?o "voice", *lea "murmur", MQA *?eo* "voice". The glottal stop is from *D/R/L. The *o* is from *A. Assimilations.

***D = R, *I = E** ***D = R, *A = A** ***D = #, *A = O**

TOOTH Maori *niho* "tooth", PMP *ipen "tooth", PPN *nifo "tooth", Malay *gigi* "tooth", Tagalog *nigpin* "tooth", PWS *ní, nín* "tooth", Bantu *jino* "tooth", PWN *NÍN,* (*NÍGHIN*) "tooth", compare especially Gbari *nyi-kna* "tooth", Djola *ka-nying* "tooth", Bidjogo *ka-nyi* "tooth", Pepel *bi-nyi* "tooth", Bola *pu-nyi* "tooth", Sarar *pu-nging* "tooth", Djola *fi-nging* "tooth". The Maori *ho* is from PWS *ká* meaning "bite". The element *pi* means "small".

***N = N, *I = I** ***K = H, *A = O**

TORCH Maori *rama* "torch" (eeling), PMP *damaR "torch", PPN *rama "torch", Fijian *rāma* "cast light", "lamp", East Uvean *la/lama* "fishing w. torches", Hawaian *lama, lamakū* "torch", Malay *andang* "torch". One of a few cases of PPN *r. These words are related to PWS *la, (da)* "day", Maori *rā* "day, sun" (or *tá* "fire" ? PWS *d* > Maori *r,* PWS *t* > Maori *t*). But possible *t/d* interchange ? Tagalog *tangláw* "torch".

***D = R, *A = A**

TORMENT Māori *aitō* "torment" (Ngata), Rarotongan *aito* "tormentor". Compare Māori *aituā* "misfortune, evil omen", from *aitu* "demon". For the etymology see *aitu, aituā* which originally referred to a god or ancestral spirit. Such spirits could be good or bad, as in Africa.

The sound change [*ai* > *o*] is frequent in Niger-Congo languages. The final *ā* incorporates an –*a* old Niger-Congo article, preceded by –*a*-. The word once meant "men".

TOUCH Maori *pā* "touch" , PPN *pā "touch", PWS *búá, búák* "arm, hand", Kissi *ba* "arm, hand", PWN *BUAK* "arm", *BUAKA, (BUEKA)* "shoulder". Kongo *simba,* Bangi etc *mama* "touch". Maori *whāwhā* "feel" has a different consonant grade. Compare Gbari *o-bwa* "arm", also *gma* "arm", Mussu *bwa* "arm", Djuku *vo* "arm", Poto *ewoko* "hand, arm". (PPN) *fãfā "feel, touch", Rarotongan *ʔāʔā* "feel with hands", Tualofan *fāfā, hāhā* "feel w. fingers".

***B = P, *A = A** ***BU = WH, *A = A**

TOWARDS Maori particle *ana* (Williams p. 9, 1. (ii)) indicates "continuance" or 4. "the point to which anything reaches". Compare 1. *anā* "there", (i) "cave". This may be from PWS *gà* "place, Guang *ga-néŋ* "so" (dial), Mende *ga-ma* "towards" (often with *mai* in Maori). If so we have *g > #.* The following *na* is PWS "go" (or "that"). PWS *gan* "arrow".

***G = #, *A = A** ***N = N, *A = A**

TREE Maori *kāī* "type of tree", (PPN) *kai "tree, wood", PMP *aka(r) "root", PPN *aka "root", Maori *kawaka* "NZ cedar tree", A-A, Chad: Bata *kade* "tree", Njei *kadi* "tree", Malay *pokok kayu* "tree", PWS *ká* "cut", Grebo *ka-de* "to wound", Songhai *ka-ti* "to wound", Bantu *kata* "to cut" ? PWS *kàl,* Bantu *ikala* "to remain" may be relevant. Tagalog *angkán* "tribe". See following entries.

***K = K, *A = A**

TREE /TRIBE Maori *āti* "descendant" (used in tribal names), *tī* "cabbage tree", *titi* "a peg", *tia* "a stake", PPN *tī "cordyline sp.", PPN *titi "peg", (PPN) *tika "dart", PNC *ti* "tree, bush", Bantu *tí* "tree", Bantu *di* "tribe", compare Rarotongan Maori *a'i* "tree sp., sandalwood", Fijian *yasi* "tree sp. , sandalwood", Igbo *o-sísí* "tree", Avatime, Nya *o-si* "tree", Yala *o-tši* "tree". The Maori tribe is thought of as a tree. Ancestors dwelt in trees. Compare Maori *tira* "mast", ie "tree of sail". Maori *pū* means "tribe", also "root of tree", "origin, source". East Futunan *pua* "tree sp. and its flowers", also East Uvean *pua,* Samoan *pua,* Tongan *pua,* Fijian *bua* are related to this root. Compare PWS *bua* "grass cloth", *pú* "plantation, field, bush". Tagalog *punò* "tree". Malay *ibu* "mother".

***T = T, *I = I** ***P = P, *U = U**

TWIN Maori *mahanga* “twin”, PMP *pasaN “twins”, PPN *masaN-a “pair”, Malay *kembar* “twin”, Tagalog *kambál* “twin”, Bantu *páca* “twin”, Lolo *basa* “twins”, Ngala *masa* “twins”, Poto, Ngombe *mapasa* “twins”, Kele *baasa* “twins”, Swahili *pacha* “twins”, Soko *haasa* “twins”. The Maori *ma-* is a plural prefix. The root is PWS *bà* “two”, with *b* > *h.* The Maori *–nga* is probably a postposed plural marker = a plural article.

***B = H(WH), *A = A** ***M = M, *A = A**

TWO Maori *rua* “two”, PMP *Dewha(h) “two”, PPN *rua “two”, PWS *bà* “two”, Nupe *gu-bà* “two”, Djola *lu-ba* “two” (with loss of *b*), Bantu *bidi* “two”, Temne *ka-bari* “twins”, Tagalog *dalawá* “two”. Malay has *dua* “two”, as have Banjar and Iban (related to Malay). Proto-Austronesian *Duwa has *w* < *b.* Voltaic (Manessy) has d*e* “two”, compare Maori *rie, rienga* (with postposed plural article) “two”. Togo Remnant (Heine) has *-níwa “two” (possibly a nasal grade). Fijian has *dua* “one”, but *duarua* “feet of human cooked and eaten”, Fijian *drua* “double” (< *duarua* ?).

****D = R, **U = U, *A = A** ****D = R, *I = I, *A = E**

UMBILICAL CORD Māori *iho* “umbilical cord”, also “heart”, “lock of hair”. PPN *io “longitudinal strip of flesh”, Māori *io* “strip, shread, cut into strips”. The word (with its various meanings) is from PWS *ka* “hand”, Yoruba *i-ka* “finger”, Ahlo *i-kà* “hand”, which gives *ká* “cut”. Hair is cut, the heart is cut out, the umbilical cord is cut. Particular importance was given to the umbilical cord in Africa, Egypt and among the New Zealand Maoris. It was buried under a tree (the ancestral tree). The *i-* is a Niger-Congo noun prefix.

***K = H, *A = O** ***I = I**

VEIN Maori *uaua, iaia* “vein, artery”, PPN *uaua “vein”, Urbantu (Meinhof) *umu-kîpa* “vein, artery’, Peli *mo-šifa* “vein”, Swahili *m-šipā* “vein”, Konde *iki-sipha,* Kamba *mu-kiwa* “root”. Bantu (Meeussen) *ki,pá* “vein, sinew, muscle”. Possible influence from PWS *kua* “leg” or “bone” (Bantu *kupa*). The Maori is reduplicated : *kipa-kipa* > *ia-ia.* Tagalog *ugát* “vein”, Malay *urat darah* “vein” (*darah* “blood”). Possibly an original labiovelar.

***K = #, *I = I** ***P = #, *A = A** ***K = #, *U = U,** ***P = #, *A = A**

VILLAGE Maori *pā* "fortified village, stockade". PWS *bà* "wide and flat, big and round", Togo Remnant (Heine) *ka-pá "house", PWS *ba* "barn". Maori *pātaka* "storehouse". Maori *pā* must be from a reduplicated form *baba,* with medial consonant loss. Vekens *ba* "village".

***B = P, *A = A**

VOMIT (v) Maori *ruaki* "vomit", PMP *luaq "vomit", PPN *lua'aki "vomit", PPN *lua "vomit", often with suffix *–ki,* Bantu *duk* "vomit", *DÓK* "vomit", Kongo *luka,* Bangi, Ngala *lua* "vomit". Tagalog *suka* "vomit (noun)" ; Malay *muntah* "vomit" ?

***D = R, *UA = UA** ***K = K, *I = ?**

WALK Maori *haere* "walk",PPN *fano "go", PPN *fai "follow", Hawaiian *hele* "walk", *haele, uhaele* (plural) "come", Malay *jalan kaki* "walk" (literally "go foot"), Tagalog *lakad* "walk (noun)", PWS *ba* "be in a place" (> *wh* > *h*), PWS *la* "there" (or "go"). Maori *waewae* "walk", from PWS *kua* "leg, foot", Maori *waewae* "leg", "foot", "footprint", (with *kw > *w*).

***B = H(WH), *A = A** ***KW = W, *A = A**

WARM Maori *mahana, werawera* "warm"; PMP *panas "warm", PPN *ma-fana "warm", PPN *wela "hot, heat". Malay *panas* "warm", *hangat* "warm", Tagalog *mainit* "warm", *painitan* "to warm". I relate *werawera* to PWS *gui, guia* "sun", Tschi *o-w'ia* "sun", Lobi *wi-ri* "sun", Yula *we* "sun", Tem *we-re* "sun". Maori *rā* "sun". Maori *mahana* has a prefix *ma-* followed by the root Bantu *pía* "fire", Bantu *BÀDÀ* "burn, through sitting near fire", *PÉ* "become burnt". Old Bantu *pika* "burn, cook".

***GHW = W, *IA = E** ***B = H, *A = A**

WARRIOR Maori *kai rākau* "body of men skilled in arms", Fijian *kai* "male inhabitant", *kai kai* "people". The expression is probably due to the practice of cannabalism. Warriors were eaten. See under "eat", for a derivation from *ka-di. Or *tāne = kāne < T/Kāne.*

***K = K, *A = A *D/N = #, *I = I**

WATER Maori *wai* "water", *wei, wē* "water", PMP *wa(h)iR "water", PPN *wai "water", PWS *bà* "swamp", Mossi *baka* "sea", PWS *gia* (*ghwia) "water", Bangi, Ngala, Poto *mai* "water", Swahili *maji* "water", Lolo *basi* "water", Kele *balia* "water", Ngombe *madiba* "water". Maori *manga* "stream", "branch". The liquid prefix of Niger-Congo is *ma-*. This may represent a nasal grade: *m-ba*. A derivation from *ba* is likely. Malay *air* "water" has lost the semi-vowel. Malay also has *maa* "water" (of life), Rarotongan *vai* "water". Compare *ua* "rain" ? Theoretically PWS *b* > Maori *wh.* But some interchange between *w/wh.* Tagalog *tubig* "water" is related to Maori *roto* "lake", PWS *tu, tua,(to)* "water". Trombetti used *WA "water" in his theory regarding the original language of mankind.

***B = W(WH), *A = A ?**

WATERFALL Māori *rere* "waterfall, fall of rain", PPN *rano "lake, swamp", N-S : Fur *ara* "rain", Lendu *ra, arra* "sky", Berta *rau* "thirst", Bari *kare* "river". "Sky" = "water, rain". PWS *la, (da)* "day", Proto-Voltaic *do "sky". African languages tend to have the same word *ra for "sky", "snake", "rain, water". Māori does not have a word for "snake" (lacking in NZ). The word *rere* "waterfall" is probably an *e*-grade of *ra* "sun, sky" (reduplicated). PPN *rara "heat, fire". The sun was thought of as fire. Another possibility is that *rere* here is related to Rarotongan *rere* "leap, jump", which would explain "waterfall" but not "fall of rain".

***R = R, *A = E**

WE Maori *tātou* "we all including you" *mātou* "we all excluding you" *tāua* "you and I", *māua,* "us, we two (but not you)". PWS *ti, tu,* Bantu *ti, tu,* "we" (Johnston 1911), PWN *TIU* "we". PPN *toru "three", Maori *torutoru* "few". Perhaps *–tou* > *-toru* as *–ua* > *rua* "two". The ending *–ua* is for "two". PWS *ma* "this". Tagalog *tayo* "we" (inclusive), *kamí* "we" (exclusive), Malay *kami* "we" (exclusive), *kita* "we" (inclusive), PWS *mi* "I, me" (or "we"). Bantu *TÈ* "that".

***T = T, *U = O** ***D = #, *UA = UA** ***M = M, *A = A**

WET Maori *mākū, haumākū* "wet", *maero* "channel, float", PPN *ma?anu "float", PWS *ma* "liquid prefix". Temne *m-aŋt, am-aŋt* "water", Bangi, Ngala, Poto *mai* "water", Lolo *basi*, Kele *balia* "water". PWS *bà, bàt* "swamp", Mende *batī* "swamp", Efik *m-bat* "mud". Luo (N-S) *madh* "to drink". Ngombe *madiba* "water". Probably *m-ba- "water". Malay *basah* "wet", Tagalog *basâ* "wet". [Compare Latin *madidus* "wet"].

***M = M, *A = A**

WHAT ? Maori *aha,* PMP *apa "what?", Malay *apa* "what?", PMP *pija "how many?". PWS *ba* "someone", Guang *oba* "someone" etc, PWS *ba* "they" (third plural pronoun), Bantu *aba* "they". This word is a pronoun, interrogative, prefix etc, depending on the accentuation. Compare Soko *mbi*? "what?" PWN *BA* "they", *BI* "they".

***B = H, *A = A (B > P > H)**

WHEN Maori *ana, inā, ua* "when", PPN *nA "there", PWS *na* "this", PWS *na* "not". See preceding example. For Maori *ua* compare Congolese *wai?* "which"? (Stapleton 1903 : 104), PWS *gu(a)* "he". These words are formed from the demonstrative pronouns. Compare *wai* "who"? Tagalog *anó* "what".

***N = N, *A = A** ***GHW = W, *A = A**

WHERE/HOW MANY Maori *hea, whea?,* PMP *pija "how many", PPN *fiha "how many", Hawaiian *hia* "how many", Maori *hia* "how many", "several", Maori *hea, whea* "what place, (with prepositions "where, whither, of what place, whence), any place" also "what time". PWS *bia* "place", also "where". Ngala *boi*? "how many, how much?".

***B = WH, H, *IA = E?**

WHITE Maori *mā* "white", *kōmā, tea* "whitish", *huka* "foam, frost, snow, hair" (all white), Malay *putih* "white", Tagalog *putî* "white", PWS *màn* "colour, pitch, lime" (with prefix *ko*-), PWS *pú* "feather, hair, foam" *pù* "white" (*ga* may be suffixed to this root, as in Mossi, Kusassi). The word *màn* "white" may be from *m-tan* "cloth", cloth typically being white, PPN *tea "white", Samoan *–tea* "white", Ngala, Poto *–tani* "white", Kele – *tano* "white", Old Bantu *–tωka* "white".

***M = M, *A = A** ***P = H, *U = U** ***G = K, *A = A** ***T = T, *A = E**

WHO ? Maori *wai*,(also "somebody"), Maori *ai* (used in relative clauses after a verb or preposition, compare Hawaiian), PMP *(s)a(y)i "who"?, PPN *hai "who", Hawaiian *ai, wai* "who", Malay *siapa* "who"?, *yang* "who" (relative), Tagalog *sino* "who" (pronoun), Maori *ai* (relative), Compare Rarotongan *a* (relative pronoun). Congolese *wai* "which"? (Stapleton 1903 : 104), PWS *gu(a)* "he". Or PWS *ba* "he, she". Togo Remnant (Heine) has *-wáni "who".

***GHW = W, *A = A or** ***B = W, *A = A** ***GHW = #, *A = A**

WIDE Maori *whānui, wharahi* "broad", Maori *nui* "big", PPN *nui "big", PPN *wā "interval of space or time", Malay *besar* "big", Tagalog *malaki* "big", PWS *bà* "wide", PWS *kuì* "big" (*kuì* > **n-kui*; "big" is prefixed with a nasal to indicate "man": men were big by convention, women were small, *ki*). Is *malaki* from **m-ba*- ? (nasal grade ?).

***B = WH, *A = A** ***(n)K = N, *UI = UI**

WIFE Maori *wahine, hoa,* "companion, spouse", *hoahoa* "spouse, two wives of same husband", PMP *binay "female", PPN *fine "female", Malay *bini* "wife", PWS *bí, (bia)* "to bear" "beget", PWS *bí* "female breast", Koke *ba* "child", Bantu *bíad* "give birth", Kele *wali* "wife", Lolo *waji* "wife", Ngala, Poto, Ngombe *mwali* "wife", "Wife" *hi* is prefixed with *ba* "give birth" and suffixed with *na* "mother". The *–a* of *hoa* is an old article. Possibly *hoa* is not from PWS *ku* "companion', but *ka* "woman". Prefix *wa-* from old noun : Ngala *m-wa-li.*

***B = H, *I = I** ***B = W, *A = A** ***N = N, *A = E** ***K = H, *U = O**

WIND Maori, *hau* "wind", (Maori *whengu* "snort"), PPN *f(a,e,)ŋu "blow through nose", Malay *angin, bayu* "wind", Tagalog *hangin* "wind", PWS *pap, pep* "wind", Bantu *pépo* "cold wind", PWN *PHÍÀP* "cold", PWN *PHUD* "blow".

***P = H, *A = A** *** (n)G = #, *U = U** **or** ***PH = #, *U = U**

WING Maori *parirau, pākau, paihau* "wing", Tagalog *pakpák, bagwís* "wing", PWN *PHET* "blow", PWN *PHÍÀP* "cold", PWN *PHUD* "blow", PWN *PHÚPH* "wind", PWN *PHUNPHUN* "wind", PWS *pú* "to blow", Gola *fua* "to blow", Bantu *pûla* "to blow", PWN *BÁMBÀM,* "wing", PWN *PAPA* "wing". Vekens *kupapa* "wing".

***P = P, *A = A**

WIPE Maori *muru, muku, uku* "wipe", (PPN) *kuLu "strike", Marquesan *?u?u* "push with elbow or hand", Tagalog *magkuskús* "wipe", Bantu *kuc* "rub", Bangi, Ngala *kula* "rub on", Kongo *kungula* "to wipe". PWS *mu* "in, on"? Probable nasal grade of *ku* "rub".

***K = K, *U = U**

WITH Maori *i, kei, ki, me, hei,* PWS *ka, (kia), kan* “side” (also “hip”), PWS *mà* “back”. The words for “side” and “back” are used to indicate “alongside”, “beside”, “behind” etc. The *k* may be lenis > *h* or #. Phonetic doublets *ki, i,* and *kei, hei.* PWS *ki* “go”.

kei	***K = K, *A = E**
i	***K = #, *I = I**
ki	***K = K, *I = I**
hei	***K = H, *A = E**
me	***M = M, *A = E**

WOMAN Maori *wahine, hine* “girl”, PMP *binay “woman”, PPN *fine “woman”, (*wa* is a prefix); PWS *bí* “to bear child”, also Maori *kō* “term of address to a girl”, PCS *ko* “woman”, Ubangi (Santandrea 1961) *ko* “marry”, PWN *GWO* “f. genital”, Bantu *go* “pudenda”, Fula *kowako* “vagina”, Yoruba *a-ko* “scabbard”, Mande *ko* “belly”, Khoisan, Hatsa *ukxowa* “vulva”, /Xam (S) *//khau* “vulva”. PWS *gua* “gate”, PWN *KHOLO* “hole”. Also PWS *na, ne* “mother”. The Maori words *ruahine* “old woman”, *tuahine* “elder sister” are prefixed (*wahine*).*Whae, uwha* >PWS *bí(a).* Adamawa (Boyd) [c] *wá-i, [mu]*wa’a/māwín “woman”. Compare Moriori *mahine* “woman”.

B = (W)H, *I = I** ***N = N, *A = E** **(GW?)**K = K, *O = O**

WOMAN, OLD Maori *kuikui* “old woman”, Maori *kui* “woman”, Maori *kuia, kuiakuia* “old woman”, PWS *ku, kul* “old”, Guang *kuku* “old”, Efik *o-kuku* “aged man”, Mossi *kul-ya* “old”, PWN *KÚL* “be old”, also PWS *kúí* “to kill”, Edo *kwi-li* “to kill”. Ngala, Poto *-nunu* “old”, Kongo *–anunu* “old” may be a nasal grade of *kuku.* Maori *(ko)koro* “old man”, Mande *koro*.

***K = K, *U = U** ***K = K, *O = O** ***L = R, *O = O**

WOODS Maori *ngahere, puihi* "woods", Malay *hutan* "woods", PWS *bua* "grass skirt", PWS *pú* "bush", Mossi *pū-γu* "field", Khoisan languages : Hatsa *//kau* "stick", !Kung (N) *//gao* "walking stick", /Xam, ≠Khomani, Batwa, /Auni, Masarwa, /Nu, //En, etc have *//ka* "stick, tree". Niger-Congo : Longuda, *ti(ka)* "tree", Mossi *tí-γa,* Kusassi *tê-ga* "tree", Bantu *tonga* "stick", *cati* "stake".

***P = P, *U = U** ***(n) = NG, *A = A**

WORK (v) Maori *mahi* "work", PPN *mafi "work", PNC *mah* "make, build, work", PWS *ma* "to finish", PWN *MAL* "finish, be finished". PWS *pí* "house", PWN *PÍ* "stone, rock", Malay *membina* "build". Soko *fea* "build" ?

***M = M, *A = A** ***P = H, *I = I**

WOUNDED Maori *tū* "wounded", *tuki* "strike", PPN *tuki "strike", Malay *ketuk* "knock", Tagalog *tumuktók* "knock", PWS *tù* "to knock, strike", Vai *tū* "knock, strike". An old defective Maori "Neuter Verb" *tū* "wounded", (Williams & Williams p. 48 – 49). Compare M. *motu* "broken", *mutu* "cut short".

***T = T, *U = U**

YAM Maori *uhi, uwhi* "yam", PMP *qubi(h) "yam", PPN *?ufi "yam", Fiji *uvi* "yam". root, PWN *BI, BII* "seed, child, bear", Bantu *beju* "seed". Malay *ubi* "yam", Tagalog *tugî* "yam", (PWS has *ki, ku* "yam", compare Maori *kumara*). Maori *poa* "food" (see *popoa*)

is from Ndogo *po,* Tagbu *pô,* Feroge *bòò* "yam" (Santandrea 1961) I think.

***K = H, *I = I** ***K = K, *U = U** ***B = P, *O = O**

YE Maori *koutou* (plural), *kōrua* "you two" (dual), Bantu *gwe, hu, ho?* PWN *MU* "thou", *MUI* "ye" may have prenasalised this root. [*m-ku* > *mu*].Tagalog *ikáw, kayó* "you", Malay *kamu* "you".

***K = H, *U = O**

YEAR Maori *tau* "year", PPN *ta?u "season", Marquesan *tau* "year of ten moons", Tongan *ta?u* "yam season cycle, year". Malay *tahun* "year", Tagalog *taón* "year", Bantu *(j)áka* "year" is not related. PWS *la* "day", Guang *dā* "day", Ewe, Tschi, Ga, Guang, and Animere *dā* "always". Mossi, Dagarti, Kussassi have *–b* on the end of this word (> *u*). Or from PWS *tá* "fire" (of the sun).

***T = T, *A = A**

GOD Maori *Io* is the Maori Supreme God. In Africa "God" is often identified with the "sky, the heavens" (Johnston 1919- : 30, paragraph 3). PWS has *gi* "air, atmosphere, firmament". We compare Maori *Io* with Lolo *jiko* "sky", which, with consonant loss (as in *io* "flesh") would give *Io*. Comparable examples: Bangi, Ngala, Poto *likolo* "sky". The word is probably also related to the word for "he", PWS *gi* "this", PWS *gu(a)* [*ghwya] > *wo, o, yo,* "he". In early languages people say "He, the sky rains" etc. Greek *Zeus huei* "Zeus rains".

***GHWY = I/Y, *WA = O (*J = Y, *UA = O)**

GODS (Food for) A sacred place where food for the gods was deposited was called *manea.* In Africa the ancestral spirits were called *mani* (Latin *manes*). The *–a* is an article. One thinks of the Roman Lares here (Etruscan Lasas), spirits of the dead. Compare Māori *rare* "lie, rest", *raro* "below, Underworld", (PPN *lalo),*rārā* "there, yonder", Latin *larva* "ghost".

***M = M, *A = A *N = N, *I = E**

NOTE : The Moriori (Chatham Is) are linguistically close to South Island Maori (King 2000 : 21). See Deighton's word list on pages 195 – 2003. They have a plural of *tupuna* "ancestor" in *karapuna,* and prevocalic *i-* on *iaroha = aroha* "affection", *iawe* "soot" = *awe* "soot", *ioranga = oranga* "life" prevocalic *w-* on *warero = arero* "tongue", indicating survival of early consonants ; *imi* for *iwi* "bone", *mahine = wahine* "woman"; and some cases of vowel harmony not in standard Maori : *kerere* "messenger" = *karere, timiti mahine = tamahine* "daughter", *tiringa = taringa* "ears".

What little evidence there is supports our Niger-Congo argument. Thus the extra initial semivocalic consonants reflect the CV stage of the Niger-Congo prefixes (often from labiovelars + V). The *kara* of *karapuna* shows the survival of an alternative form of "plural article". In Maori *kara* is a form of address used to old men, perhaps from PWS *kál(a)* "soul" (or = PWS *ka(ra)* "flesh", with *–ra* as "Klassensuffix"). The Moriori sound *m* for *w* may be a nasal grade. Ancient mobility of order is suggested by Moriori *ka ko* "glad" versus Maori *koa* (< *ko ka), compare Maori *toenga kai* "remains of food" with Moriori *toe kai* (lost or absent postposed plural article). Our interpretation of Maori postposed *–ra* as an old African article is favoured by Maori *taura* "cord" as against Moriori *tau* "cord", which shows the element can be detached. The Moriori pronunciation of *t* as *tch* recalls the affrication of *t* in Niger-Congo. The Moriori final voiceless vowels recall vowel loss in Niger-Congo (Tiv, Benin etc). See also however Maori *e kare ma* "term of address". Greek *kara* "dear head".

ACCENT : The weakness and loss of word endings in Moriori, together with the preservation of initial semivowels and some initial consonants, may indicate a strong initial stress accent. Maori loss of initial and final consonants supports stress on the stem syllable. Compare the Bantu language/tribal name Irangi with Maori *e rangi* "sir" (to chiefs). If there was an original pitch accent in Malayo-Polynesian, we assume it was well and truly lost in Oceanic.

IMPLICATIONS

This preliminary enquiry has serious implications for Niger-Congo research. Maori cannot have borrowed from Niger-Congo (or Nilo-Saharan). Yet it preserves some of the oldest words (including synonyms) in these languages. Lexical links exist with Gur, Adamawa-Eastern, Togo Remnant (much of which is thought to be extinct), Bantu (a very important prefix pair connects Bantu), but also with Khoisan and Nilo-Saharan, not to mention Ancient Egyptian. Khoisan is probably nearer to Niger-Congo than has been thought. Its "click" sounds, mainly word-initial, are probably reduced "prefixes" from Niger-Congo or Pre-Niger-Congo. Greenberg (1963 : 84) mentions that "many Hatsa nouns begin with ha-, ho-, or hi-." These "demonstratives" equate with Niger-Congo prefixes in Westermann. Maori also has important links with Proto- Central Sudanic (Bender 1989): *ra* "sky", b*a* "village", b*u* "egg", b*u* "cloud", *bi* "hair" (M.*pu*), *du* "hit" (M. *patu*), *ka* "bite", *kaga* "tree", *ku* "old", *kV* "belly", *kVnj* "fish", *nyo* "eat" *ri* "two", *tu* "motion", *tsu* "cut, hit", *vu* "blow". It may also be significant that Kordofanian language names of the Heiban group match Maori words: Tira, Rere, Kau "ancestor" (in Maori).

We consider the Maori came via E. Africa. Tonga dialects ocur in Zambia, Malawi, Mozambique and Zimbabwe. NZ has Tonga-riro; compare Tonga near Fiji. Johnston (1922) treats Ronga as from Tonga (an *r-* grade ?). This word connects Easter Island (*rongorongo* script) with both Africa and the Pacific Island of Tonga. Fijian Nandi matches Niger-Congo Nandi, Nande of the Congo (also called eki-Mate, eki-Tangi ; *mate, tangi* are basic Maori

words). Spiral facial tattoos are Maori, also Luluwa (Zaire), [Gröning]. The Pokomo (River Tana) canoe men, described by Alice Werner as "short and sturdy", resemble the Maori. Maori *poko* means "short". The Konso Posts, which can be connected with the Easter Island statues, come from the same part of East Africa. This all points to an East African origin for the Maoris and associated tribes.

The importance of Maori is that it establishes that Malayo-Polynesian (and Austro-Thai) came ultimately from Africa, and belong to Pre-Proto-Niger-Congo. The Polynesian (and Austro-Thai) languages are mainly VSO in their word order, as are certain Nilo-Saharan languages = Chari-Nile, Eastern Sudanic (Turkana, Nandi, Lotuko, Didinga, Masai). The name Nandi links Nilo-Saharan with Niger-Congo. Some Afro-Asiatic languages also have SVO (Ancient Egyptian, Ge'ez, Iraqi Arabic (written)). All African languages are related, and have a common origin.

MADAGASCAR

In early times both Bantu and Malayo-Polynesian languages appear to have been spoken on Madagascar, an island off the east coast of Africa. This fact acquires particular importance in the light of our discovery that Maori is related to Bantu and the other Niger-Congo languages. We assume that Niger-Congo came out of Nilo-Saharan. At the opening of this book we investigated the distribution of the word *tai,* which can be used to trace the origins of the Malayo-Polynesian languages. Madagascar has languages called Taimoro, Taifasy, Taisaka. The name Tajona occurs off the west coast of Madagascar. Both Bara and Bari are Nilo-Saharan names, but also Niger-Congo. Bara is a language of Madagascar, and is classified as Barito. Compare also Ikongo on Madagascar with the African word Congo.

The prefixes *ma-*, *a-*, *i-* are all found on placenames in Western Madagascar. These prefixes are very common in Niger-Congo languages. We suggest the hypothesis that a Niger-Congo language mutated on Madagascar and formed the basis for the Malayo-Polynesian languages. Maori has *mātai* "sea, fish", (also "watch"), Egyptian *m33, maa* "see", also *kōtai* "bird", *pūtai* "sea foam". All Maori prefixes to *–tai* have an accented long vowel. It follows that these "prefixes" are really from reduplicated full words : *mama, koko, pupu* + *tai* "sea" (adj). Compare the Madagascan languages An-taiva, An-taimoro (prefixed *an(a)-*) = reduplicated.

Sharp (1957 : 36) mentions that the ancient population of Madagascar came from the East Indian islands, from which their ancestors plyed back and forth in early times. "The prevailing winds and currents from the East Indies to Madagascar are among the most constant in the world... Madagascar is a big island which might be expected to catch such voyagers". He notes that "the farther Pacific Islands, Madagascar and the Nicobars, are the only islands in the world outside the land-locked seas and gulfs which were more than 300 miles from the continents and chains of islands extending from them and were inhabited at the time of later discovery. All the others in the world were uninhabited".

ABBREVIATIONS

ATR	**Advanced Tongue Root**
CV	**Consonant Vowel**
N-C	**Niger-Congo**
N-S	**Nilo-Saharan**
PAB	**Proto-Potou-Akanic-Bantu**
PAN	**Proto-Austonesian**
PB	**Particle Base**
PCS	**Proto-Central Sudanic**
PMP	**Proto-Malayo-Polynesian**
PNC	**Proto-Niger-Congo**
PPN	**Proto-Polynesian**
PWN	**Proto-West Nigritic**
PWS	**Proto-West Sudanic**
VSO	**Verb Subject Object**
I-E	**Indo-European**

SYMBOLS

d. (retroflex *d*)	*g̲* (voiced lenis labiovelar)	**d** (implosive *d*)
ŋ (velar nasal)	*ɣ* (voiced velar fricative)	*ʔ, q, ʻ* (glottal stop)

Fijian *q = ng*, Fijian *g = ŋ.* Other Fijian letters have special force : *b & d = mb, nd, c = đ, j = ch.*

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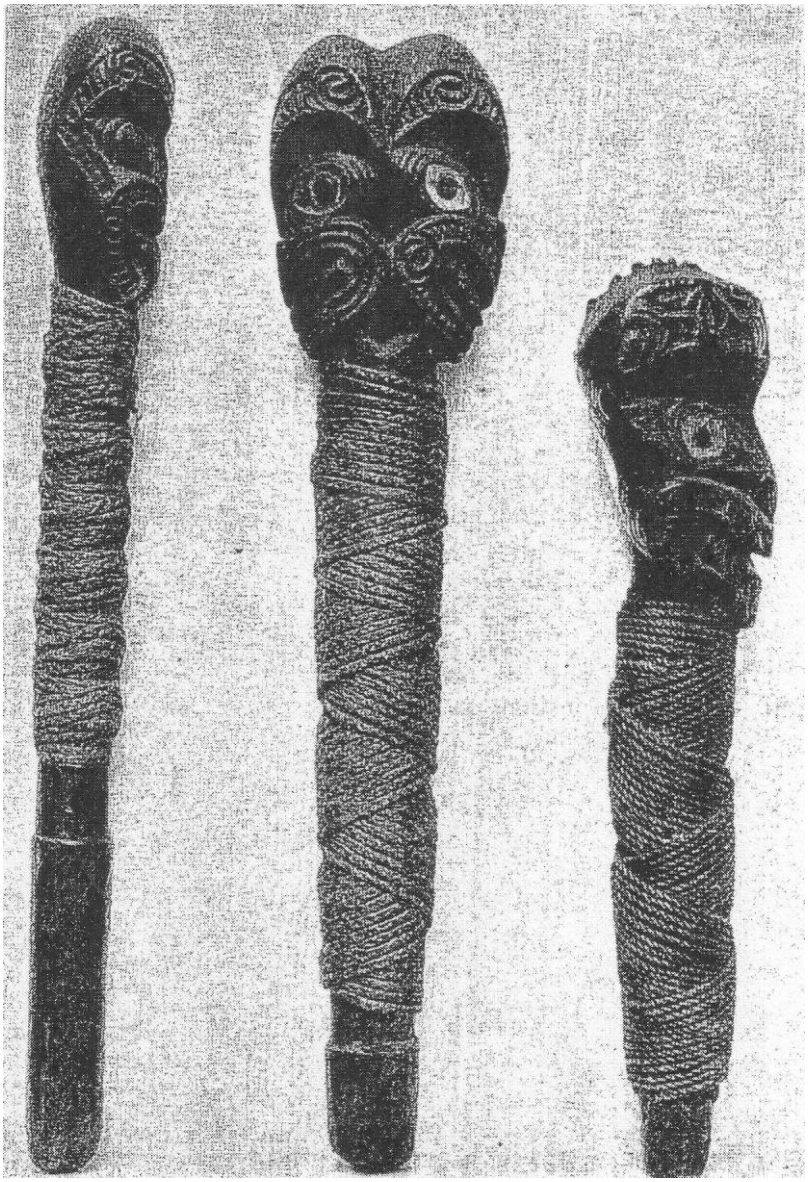
See NEW ZEALAND EGYPTOLOGY NEWS (2006, 2007 etc) for other articles by Campbell-Dunn relevant to Maori culture. These are now republished in CAMPBELL-DUNN (2009), Egyptian Interpretations, Penny Farthing Press, Christchurch, New Zealand. Old Republications : MacKENZIE, D. (1930/1996), South Seas : Myths and Legends, Random House & MacKENZIE, D. (1923/1996), Pre-Columbian America, Random House, London : fascinating content, quotations and illustrations.

NOTE : De Saussure, F. (1879/1968), in Mémoire sur le système primitif des voyelles dans les langues indo-européennes, Leipzig/Hildesheim, discusses the changes of *a > e, a > o* in the Indo-European languages. His book gave rise to what is now called Laryngeal Theory. Lehmann, W. (1955), in Proto-Indo-European Phonology, Texas & Austin, says on page 8, that in an earlier stage of PIE, "during the period with phonemic pitch accent occurred the sound change of [e] to [o]". He assumes an even earlier pre-IE phonemic stress. One wonders if Maori I*a > e*, II*a > o* should be explained in terms of a pitch accent. I don't propose to investigate the matter here. However I do consider that what passes for Laryngeal Theory would be better accounted for by looking at the history of the Niger-Congo prefixes.



Maori Godsticks (from Best)

POSTSCRIPT

Linguistic Observations

Barry Blake in Australian Aboriginal Languages (1991: 28), University of Queensland Press, writes 'Names for parts of the body are commonly extended and in Aboriginal languages we find examples of words for "mouth" being extended to refer to an entrance to a burrow or cave or a doorway, words for "arm" (which will normally cover the front leg or paw of an animal and the wing of a bird) being extended to mean "tributary", words for "thigh" being extended to cover the trunk of a tree, and words for "bone" being extended to cover a branch of a tree or a spear. In Kalkatungu the word for "eye" is extended to mean "seed", "star" and "raindrop". Some Aborigines use the same word for "hair" and "grass" but it is not clear in such cases that one meaning is basic and the other derived.'

'A single word usually covers "breast" and "milk" but the relationship between "breast" and "milk" is not simple extension...The word for "moon" could normally be used to refer to a period of time, ie it meant approximately "month", and the word for "sun" likewise could refer to "day" '. On page 29 he mentions that one word applies to "body hair" and "fur". 'One word also covers "skin" whether it be human skin or the skin and hide of an animal... in some... languages, the word for "skin" also covers the "bark" of a tree'.

The notion of "metaphor" is not adequate to describe this situation. Early man tends to model his environment and indeed the whole universe on the human body. Thus Africans and Maoris describe the house as if it were a human body. The analogy goes into great detail, even referring to the "ribs" and "spine" of the house. The sun and moon may be referred to as "eyes" of the universe (the moon is the left eye, the sun the right), which in turn is an extension of the house, with the sky as a roof . Likewise trees, animals etc are not regarded as separate from humans. The entirety of nature is seen as an organic whole. Man and his environment are one.

A quotation from Leenhardt (1946 : xi) in his Langues et Dialectes de l' Austro-Mélanésie casts additional light on the problems associated with the study of tribal languages. "La << parole >>, pour les Mélanésiens [langue canaque], comporte la pensée, le discours l' acte. Aucune distance ne les sépare l' une de l' autre...". Hence the "power of prayer", for example. Language was effective as action. It often fell under a taboo. It had not yet been dissociated. Further,

"L' ouïe n' est pas distinguée comme sensation spéciale, de sorte que << sentir >> et << entendre >> se confond ; et un mouvement imperceptible et aussi un mouvement qui n' est pas entendu ou senti. De sorte que << faux, imperceptible, (avancer) à peine, et mentir >> s' expriment par le même mot. << Dormir >> et << mordre >> sont des modalités de coucher et de pincer. Le << corps >> n' est que l' élément qui donne à une ensemble sa consistance, de sorte que la notion de corps

humain ne se distingue pas de celle de << manche de l' outil >>, du << pied de la table >>, du << lit du fleuve >> ; le << vide >> d' un trou lui même est le corps du trou. La pensée imprécise où, dans l' indifférentié, se mêlent le hasard, l' essai, ou aussi la carence de réflexion...” To the modern mind this “wave-like” property is as bewildering as Quantum Theory. One is reminded of Pike's “particle, wave and field” analogy. Leenhardt's book is a mine of valuable lexical and grammatical information, presented in its ethnological context. It illuminates both the languages and the primitive cultures they express. It is a corrective to the sterile study of grammar *in abstracto.*

Leenhardt's remarks on the native words for “god” and “totem” clarifies the meaning of these rather fraught terms. “Le nom de dieu se confond, suivant les régions, avec celui de cadavre, ou avec celui de quelque représentation mythique d' un démon, ou du totem... Le dieu le frappe. Le totem le possède. Seul le dieu, formé à l' image de l' homme, use de sagaies, et d' artifices pareils à ceux des hommes. Le totem, au contraire, procède du mythe. Il use de moyens étrangers au pouvoir de l' homme ; la possession est son apanage.” So much for scholars who deny the very existence of totemism. In general his entire INTRODUCTION gives a rich insight into the functioning of language in a social environment very different from our own. Gender languages, status languages, secret languages are all a fact of life. Women captured in war teach their children their mother's language. Typically speakers are polyglot. On p. xvii Leenhardt describes songs incorporating the same word in two or three different tongues : *go kuru, go sala ro* is equivalent to *je dors, ich schlaffe.* Languages are subject to constant change. “Elles sont en constant devenir.”

On page xxxi f. he raises the question of examples such as Ajië *go wa na geña,* French “je fais le moi”, with parallels in other Caledonian languages. Yet other languages repeat an identical pronoun such as *inu* (which also equals *geña*). The distinction is between *je* “l' être en son action” and *moi* “l' être en sa substance”. He tabulates *go wa na geña* on page xliii, and concludes that the *je* is timid, the *moi* a “third” person. Both persons are used at once. Primitive insecurity, ignorance, at the same time active and passive are expressed. Here lexical and grammatical considerations interact. But the explanation is cultural, a premodern view of man caught in the mesh of a world that both surrounds and impacts on him. Man is not distinct from his environment. Everything is seen against a background of witchcraft.

Apart from matters regarding vocabulary and meaning there are also other crucial features of “primitive” languages that need to be considered in making linguistic comparisons. It is often said that NOUNS are preferable to VERBS for comparative purposes. They have a more precise, more concrete, and therefore more readily controllable meaning. But is this difference real ? Should we insist on absolute identity of class meaning when we compare words ? Codrington had already observed the great fluidity of verbs and nouns, indeed of parts of speech in general, in Melanesian languages. Leenhardt says (1946 : xxxiii) “nos termes définis, pronom, verbe etc., confondent leur contours, et se fondent les uns dans les autres.” He even comments (1946 : xxv), on the variable particles: “ces morphèmes se présent tour à tour comme particule, pronom, verbe etc.” They are Protean, as he says.

Likewise Winstedt in his Malay Grammar (1927 : 61 ff), mentions that van Ophuijsen questions whether some Malay verbs are “verbs at all”. Delafosse on Mande (1929 : 201) claims that “tout radical mandingue est essentiellement un nom”. Sumerian, too, does not formally distinguish nouns from verbs. Both behave like nouns. But nouns with extended meaning. Thus, for example, we consider PWS *li, di* “eat” is a variant of *di* “head”. Eating is an action of the head. Just as “cut” or “tie” is an action of the arm, and so on.

In this connection it is important to point out that if “in the beginning there was the noun” these primal “nouns” were not the same as the modern noun, which is defined by contrast with the numerous other distinct word classes. “Dans la langue tout se tient.” De Saussure was right about that. These “nouns” are formally substantives, and juxtaposed as such, but are not really nouns in their semantic function.

It therefore appears probable that in early African languages the verb as such was a secondary development, in other words an innovation. If so, verbs, or verbal uses of nouns (common in early languages), become crucial in comparisons, in spite of their vague, abstract character. They show language in evolution. Verbs gradually differentiate and acquire characteristics of their own : mood, aspect, tense, voice, which were once lexical categories, indeed once nominal categories. Early languages show examples which are transitional : partial, irregular, defective verbs and so on. Further, the appearance of the traditional parts of speech, pronouns, numerals, adjectives, prepositions etc,

usually out of nouns, can now be traced as an historical process. It is a fascinating phenomenon to study in detail. And it has importance for genetic language classification. All innovations are important for genetic classification.

Provisionally we can set up three theoretical stages of language: I "Nouns" only (prehistoric) ; II Fluctuation between the emerging parts of speech (Maori) ; III Fully differentiated & distinct parts of speech (Latin). (I will not comment on the status of modern English).

There is growing evidence for this position. Scholars who have reconstructed PWS and Proto-Bantu have successfully reconstructed noun morphology, but very little for the verb. The same applies to Proto-Indo-European. Verbs are a problem to reconstruct. The forms are not standardised across languages. They are also a problem in reconstructing Proto-Afro-Asiatic. Verbs are formally more complex and look later. They are also more abstract. Abstraction developed relatively late in language history.

Even the notorious fluctuations of word order in Niger-Congo-Nilo-Saharan languages (VSO, SOV, SVO) may be due to the fact that the verb was originally not a verb, and so did not have a fixed position in the sentence. Indo-European shares this instability of verbal position. SVO seems to be late, and associated with more clearly defined verb forms.

If nominal structures were indeed earliest, this is an important piece of information. It reinforces the theory that all words may be ultimately derived from concrete nouns such as body parts. Very old languages such as Basque were concrete in their vocabulary. It even raises the question as to whether we should abandon abstract "deep structures", in favour of concrete lexical structures. So it is an argument against Chomsky and his mentalist followers. Greenberg said : "Linguistics is about languages". He was aware of the problem.

Does linguistics really need deep structures ? Or are they an aberration ? Should we stick closely to what we can observe ? We could for instance substitute rule-schemata (explained by Dik 1968 : 92 f) in describing our first stage of language. His example (from coordination) is :

$$CO \Rightarrow M^{n} \ (n > 1).$$

The strings generated by this formula are paratactic rather than hypotactic in character. This approach would simplify matters considerably, and reduce the amount of structure required. Einstein, we recall, always aimed at such simplification.

My teacher Robert Coleman eventually came to the conclusion that "deep structures" were distracting scholars from paying adequate attention to concrete language data. Furthermore John Lyons (1981:56 ff) has a very useful discussion of the limits within which De Saussure's "chess position" analogy can be applied to natural languages, which are not really static, closed systems. An overemphasis on synchronicity creates artificial problems in dealing with language change (p 58), even "insoluble theoretical pseudo-problems", to use Lyons' own words. Comparative linguistics can provide a valuable antidote to such excesses.

Linguistics should never be used, however, to impose a rigid grid on the fluid life of language. Language study draws its blood from research, not from textbooks. Languages are living organisms. Latin was killed by traditional grammarians such as Priscian, who fixated it in an unchanging "classical" form. It did not really "die" but gave birth to the Romance languages, which are living Latin. If we admit this to be true Latin is still very much with us. And it is instructive to observe what features Latin discarded (the synthetic passive, the fusional case system) to ensure its survival. Modern Dutch has likewise discarded most of its cases. Opaque inflectional morphology is not appealing even to native speakers.

The reconstruction of African Proto-languages gives us enormous depth in time, and leads us back far beyond Proto-Indo-European, towards a simpler concept of grammar. We envisage an early African stage when all words were monosyllables on a single level. Complex Indo-European morphology, with its prefixes, fusional suffixes, and even some infixes, can be broken down into strings of these monosyllabic, lexical units. Latin *a-ma-n-t,* for example, with PREFIX + ROOT + PLURAL + THIRD PERS. But all these units, as we have seen, once were "words" = "nouns" of CV structure.

Parataxis was then the only syntax known : juxtaposition of noun-like units. In the previous century the Russian linguist NJ Marr proposed just such a theory of an African polysemantic, monosyllabic source language. This, he said, was followed by an agglutinating stage. We think he was right. Language did evolve.

We also envisage a simple early phoneme set consisting mainly of plosives, and three primary vowels : *a, i, u* (like Westermann's 1927 system). Departures from this prime system are to be regarded as consonantal and vocalic grades, that is secondary developments, which are significant for genetic classification. Languages develop by differentiation at all levels. Already Afro-Asiatic shows an elaborate system of consonant grades – taken from Niger-Congo-Nilo-Saharan. Which clearly indicates its origin. Afro-Asiatic has taken this process further than Niger-Congo-Nilo-Saharan. It is an offshoot.

And if we wish to look even further over the prehistoric horizon, we may dimly see a distant protolanguage with only one, undifferentiated vowel, where *ka, ki, ku* (*kV) all meant "hand". Such reconstructions have been proposed. But we may have gone too far. We may be looking at a mirage. For all reconstruction involves loss of detail. The further we go the more detail is lost. The building is stripped down to its girders, then to its foundations, finally to a few holes in the ground. At what stage does the building cease to exist ?

In fact all documented human languages are extremely complex. So can we assume that things were ever otherwise ? Or should we assume on the contrary that man's first language was limited, tentative, spoken among a small number of strangers, for purposes of trade, and eked out with gestures ? Should we suppose that, as languages have historically differentiated, so we can wind the clock back to an early, undifferentiated stage, similar to child language ?

This argument, if carried to its logical conclusion, would bridge the speech gap between man and the apes. Indeed modern genetics has shown that such a bridge should exist. But can we prove it ? The bridge, as we have it at present, has a beginning and an end, but there is a gap in the middle.

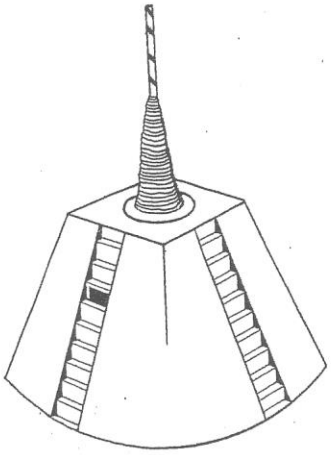
We have attached two pages with excerpts from Leenhardt (1946) to follow this section. The words for "fire" and "water" take us far back into the prehistory of language.

Nom des langues ou dialectes	189 eau	190 étendue d'eau, lac, mer
1. Ajiē	*rhë*	*nerhë*
2. Arhâ	*de*	*ne*
3. Aro	*du*	*ôe*
4. Boewe	*rhẽ*	*nerhẽ*
5. Sirhë	*rhë*	*sirhë*
6. Neku	*rhẽ*	*norhë*
7. Ciri	*a'lawo*	*newe a'lawo*
8. Anesù	*koe*	*nepoe koe*
9. ʿAragùrè	*koe*	*nepoe koe*
10. Dubea	*sō*	*nenesō*
11. Kapone	*jo*	*joaveji*
12. Pati	*jawe*	*na jawe*
13. Camuki	*a tâbe*	*a netâbe*
14. Pinje	*we*	*da'oi* [2]
15. Poai	*we*	*nen we*
16. Nèmi	*we*	*nen we*
17. Wamoang	*we*	*na we*
18. Jawe	*we*	*nen we*
19. Moenebeng	*we*	*okure we*
20. Yalasu	*we*	*nan we*
21. Belep	*we*	*na we*
22. Nenema	*wi*	*ni wi*
23. Koumac	id.	id.
24. Ñua	*we*	*ne we*
25. dialecte Bonde	id	id.
26. Poapoâ	*we*	*nen we*
27. Paomei	*we*	*nan we*
28. ʿMoavekè	*we*	*ñan we*
29. 'Moaekè	*we*	*i ja'o*
30. 'Avekè	*we*	*ñawe*
31. 'Aekè	*we*	*ñawe*
32. Nengone	*tini*	*tini*
33. : Iwatenu	id.	id.
34. De'u	*tim*	*'netim*
35. : Miñ	*medixada*	*'nemedixada*
36. Iai	*kērē*	*'ñi kērē*
37. Walis	Pour mémoire, langue polynésienne.	

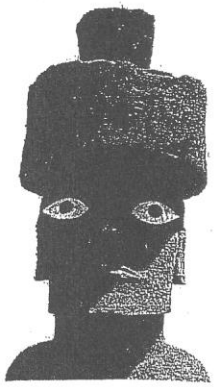
From Leenhardt (1946)

Nom des langues ou dialectes	268 feu	269 flamme
1. Ajiē	*kemoru*	*mèjara e*
2. Arhâ	*omō*	*mèjora*
3. Aro	*duo*	*mèjara duo*
4. Boewe	*nène*	*mèjara*
5. Sirhë	*ne*	*mèjara ne*
6. Neku	*rhomâ*	*mèjara*
7. Ciri	*nè*	*'na'lamene*
8. Anesù	*nè*	*jikui nè*
9. 'Aragùrè	*nè*	*virba nè*
10. Dubea	*tâ*	*beca tâ*
11. Kapone	*t'â* [1]	*kuca t'â*
12. Pati	*añe* [2]	*doromè*
13. Camuki	*a miu*	*a doale miu*
14. Pinje	*yak*	*'nole yak*
15. Poai	*yak*	*so men yak*
16. Nèmi	*yak*	*delomen*
17. Wamoang	*ðak*	*deloma ðak*
18. Jawe	*yak*	*dolomen*
19. Moenebeng	*jep*	*ulo*
20. Yalasu	*nāp*	*ulot*
21. Belep	id.	id.
22. Nenema	*yavic*	*ulot*
23. Koumac	id.	id.
24. Ñua	*iai*	*oloma*
25. dialecte Bonde	id.	id.
26. Poapoâ	*ðāc*	*delomen*
27. Poamei	*yāk*	*deloman*
28. 'Moavekè	*mae*	*'ñola mae*
29. 'Moaekè	*i mae*	*i'o la*
30. 'Avekè	*mae*	*delo mae*
31. 'Aekè	*mae*	*'ñola*
32. Nengone	*yei*	*yenerene*
33. : Iwatenu	id.	id.
34. De'u	*eē*	*uka'lokin*
35. : Miñ	*aniðë*	id. *thengë*
36. Iai	*meic*	*ba'lan*

From Leenhardt (1946)

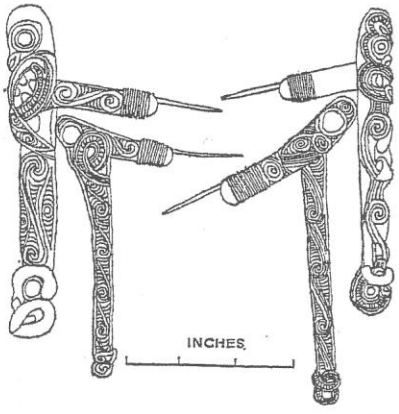


Dogon Universe (Parrinder)



Easter Island Head, with Inlaid Eyes.

Maori *hakari* (from Yate)



Tattooing Adzes (after Best)

Cultural Observations.

Culture and cultural innovations can be used to trace man's dispersion across the globe. Unusual practices or beliefs are particularly significant. Eg the nose flute (Maori & African).

For example, it was customary, among the Maori, when killing a prisoner, to first gouge out his left eye. But what was the meaning of this brutal practice? The answer I think is to be found in Africa. A Hottentot story links the coming of death with the rising and waning of the moon. The moon, as feminine, represented the left eye. It was the left eye of the sky. The sun was the right. The removal of the left eye was a foretaste of death. See Moon p. 168.

These early people believed that after death the soul passed on into a new body, whether human, plant or animal. So the practice is related to the notion of transmigration of souls. Blier (1995 : 198) identifies the eye *ye* with "one's protective spiritual counterpart" (a soul).

In Egyptian mythology the eye of Ra, the sun god, was separable from him, and had a mind of its own. It wandered, and Ra sent Thoth, the moon, to fetch it back. When it returned it found that it had been replaced by another eye, probably the moon (Ions 1968: 41). In another story Ra sent out his eye in the shape of his daughter Hathor, or Sekhmet, to subdue mankind. Later, when Ra was identified with Horus, Set, as a black pig, tore out Horus's weak eye, the moon. But sight was restored to Horus (Ions 1968: 65). Horus, the falcon, was at first a sky god, the sun and moon being its eyes (Ions 1968: 67). The moon was the left (feminine) eye. In Africa the left side was the feminine side.

From the Americas we have a Mayan codex which shows the "piercing" (removal) of a victim's left eye (Davies 1981: 229) by Quetzalcoatl. In Tahiti the eye of the victim was eaten by the king (Davies 1981: 165). Is this evidence that the Maoris (or Polynesians, or Africans) were in Central America? Certainly there are Maya paintings which depict black men and Negro traders (Miller 1999: 210, plate 185: 211, plate 186). The Mayans themselves appear to be red, with elongated heads – a practice common in Africa and Egypt. The placename Mani (Niger-Congo for "ancestors') occurs in the Maya region.

Furthermore the American step pyramids, which resemble the earlier Egyptian pyramids in many ways, may point in the same direction. Perhaps we should also bring the Maori *hakari* or food stages into the argument. The Egyptian stone pyramids, remarkably impractical and labour intensive to build, must have been preceded by more transient wooden structures. The Maori *hakari* may be the sole survivors of these antecedents. They were used for elaborate feasting and for wakes. The Egyptian pyramids were tombs, but were called "storehouses".

According to Thor Heyerdahl (1976) the Maori composite fish-hook originated in Central America. In early times it was not known in Asia. But it is at least possible that the idea for this invention was suggested by the structure of the tattooing adze. This too combines a handle, an angled arm, and a spike or barb.

Tattooing must have originated in Africa. The Maori tattooing adze is still used in Nigeria. It appears to be a reduction of the African hoe which was used for tilling the soil, and subsequently converted for use as an axe or adze.

In Africa tattooing, along with scarification and body painting (of identity marks), is a highly developed art. When Europeans first arrived in the East Indies, the Caribbean, the things they noticed most about the natives were their elaborate tattoos, which covered the whole body, and the prevalence of cannibalism. The English word cannibal derives from Carib. In fact one is tempted to derive Carib itself from the African Kari + bi "people".

In Maori sculpture the head tends to be greatly enlarged. This feature can be explained in terms of African statues which emphasised the head, which harbours a spirit. The African concept of the child-ancestor is also relevant. Children have larger heads in relation to the body. There was also a practice of artifically lengthening the head (Henschen 1966: pl.36).

More problematic is the typically Maori image of mouth with protruding tongue. This is often explained in terms of cannibalism. The only African example I know is in Wastiau's Medusa (2008: 227, Detail ill. 60, Kongo). But the Maori are thought to have spent time in the East. The Chinese dragon boats have protruding tongues, as do the heads on the prows of Maori war canoes. The name Hong Kong recalls the African Congo, Kongo. In East Africa the tribal name Hungu occurs (= Hong ?). In fact Hong Kong may incorporate two different dialect spellings.

Examples of the protruding tongue can be found in Maya art eg. the mask of the rain god Chaak in conch, spondylus and greenstone (Miller 1999: 222, pl. 198). See also the head of Chaak on a cache vessel, with shark tooth tongue (Miller 2001: 121, pl. 99). One can also mention the funerary mask of Rio Azul, carved from a block of green fuchsite, representing a deity of the night sun (Stierlin 2004: 35). Compare the pottery mask from Tlatilco, (Mexico) with protruding tongue and missing left eye (Bushnell 1965: 34, pl. 25). In primates a protruding tongue indicates aggression.

Some of these figures have inlaid eyes, reminding us of the inlaid shell eyes of Maori wooden statues. The eyes of the giant stone figures on Easter Island were also inlaid, and made of different material. When the eyes were put in the statues came to life. The codpiece, an African garment, was worn on Easter Island.

The miniature statues in Baghdad museum, eg the bearded male figure of Abu (Frankfort 1970 : 46, pl. 39), also have large, inlaid eyes, which add a sense of power to these statues. It is worth mentioning in this connection that Richards (2007) refers to the marking of trees by the Moriori to show wind direction. Similar markings have been found on trees in Sumeria.

Wind direction was an important matter for seafaring nomads. We know that the lateen sail is still common in Egypt and the Mediterranean and in the East. A possible hypothesis regarding its origin may be deduced from the shape. If tents were used on land, we suggest that when these wanderers took to the rivers or sea, the tent was converted for use as a sail. Early lateen sails have only one boom. Later two were used. Was the original boom the main pole of the tent? Which was then used to hoist the canvas or its equivalent up the mast. Early masts, as we know from Homer, were segmented, perhaps for ease of carrying by donkey.

Parties of raiders on land proceeded in single file, each warrior placing his feet in the imprint left by his predecessor, so that no trace was left to reveal the number in the party, both in Africa and in New Zealand. The same practice however was observed by the American Indians of the North. Is it evidence for Africans in America ? These war parties must have been relatively small. Stealth was essential. The Maori, like the American Indians, took scalps. These identified the slain as prey animals, and violated the sanctity of the head.

There is some evidence, as we have seen, that the Maoris or their relatives may have been in Sumeria. Quite apart from the fact that a primitive outrigger was used in Sumeria, we can mention that a type of drag anchor was employed there to steady boats moving in the current. A similar device occurs in Peru, often connected with the Maori. In New Zealand rivers this procedure would have been impossible. I suggest that the ritual stone known as the *mauri* which was carried in canoes, and had protective powers, was originally such a river anchor. Often a hole is goes through these stones, which is otherwise difficult to explain.

We conclude this section with some comments on the Maori godsticks, which were potentiated by binding (a magical activity), decorated with feathers, and driven into the ground to bring them in contact with dead spirits or *atua*. Such *atua* also inhabitated the *mauri*. A hole was often made in the heads that surmounted these godsticks. The explanation for this is given in Blier's (1995) African Vodun. The powerful African statuettes known as *bocio* "empowered cadavers" also had holes in the tops of their heads. Magical substances were inserted into these holes.

I consider that both the godstick and the *bocio* derive from the African practice of mounting skulls on stakes that were driven into the ground. As Schwimmer (1966: 71) says, heads "were impaled on the stockades of the pa" by the Maori. Heads of great chiefs were taken home and preserved. This macabre fascination with the heads of the dead continues to this day in Africa. Idi Amin, the African dictator, kept the heads of his enemies in his refrigerator, and brought them out at dinner parties, to intimidate his guests.

ALPHABETIC NOTES

BIG MEN & LITTLE WOMEN : In Africa men "big" (*ku*) were distinguished from women "small" (*ki*). A survival of this concept can be seen in Maori *rahi* "big", also "slave", "other person" etc. Malay has *laki* "husband", "male", *anak laki-laki* "son". Kongo *nleke* "boy", Ngala *lele* "male". Certain animals such as elephants were dignified as "big" in Africa. Swahili has *mwana muke* "woman", with *mwana* "child", *-ke* "small". "Girl" in Malay is *anak pĕrĕmpuan* "female child". Here *pu* is "small". Greater size of the male among primates is associated with polygamous structures. But this is not the full story. Among early humans both polyandry and polygamy were practised.

BUNGEE JUMPING : This now popular NZ activity is based on a custom from the island of Vanuatu. It is worth noting however that the Mandan Indians of Dakota have a similar practice. To initiate young men a skewer is passed through the flesh of the chest or back. A rope is then attached at one end of the skewer, the other end being tied to the top of a high scaffold. The initiate then tries to break free. I first read about this custom in George Catlin's Indian Gallery, where he describes the impaled initiates as being dropped from a height.

The Maori *hākari* or scaffold was used not only to display food but for sporting activities, which may once have included the rite described. Compare the Swing or *moari.* Maori *moa* (iii) means "climb". The word *riaki* means "raise, be elevated, drop". With the name Mandan compare kiManda and Mandankwe (both Benue-Congo, Tanzania). Near the Mandan were the Arikara tribe : Ari (Benue-Congo) + Kara (Benue-Congo, Tanzania). We consider the Maori came ultimately from East Africa. VSO is a common word order in East Africa and in Nilo-Saharan.

CANNIBALISM : This originated in hunter societies where man was just another animal. Polynesian chiefs could demand a finger from their subjects, which was then eaten. Missing fingers were common. See under FINGER, FLESH (*ika*). Hands were carried for food in old Africa. The Maori placed human heads over earth ovens to steam out the brains. Old women were sold as food to passing canoes. Such practices are regarded as "horrid" today, but were once normal features of subsistence societies.

CHILD & CHIMP : Child language is now known to go through stages : I. accumulation of a basic list of content words : (a) nouns (b) verbs); II. Two word constructs ; III. addition of functors (grammatical words etc). Kanzi the chimp uses I. plastic tokens (nouns); II. handsigns (to express a following verb). The noun is prior. But he also uses tokens for both noun & verb, with SVO word order. Is this evidence for a phrase structure model ?

DIFFERENTIATION : Very early languages developed by differentiation. Thus PWS *ba* "to be" (in a place), PWS *bía, bá* "to come", "to be on the point of ", *bò* "to be, to have", Bantu *bá* "to dwell", but compare PWS *bia* "a place", also *–be, -ba* "there", PWS *bu* "hut", *bùà, bùò* "hole". The original root was a concrete noun meaning "a type of place". But differentiation of phonetic form and of meaning has produced a variety of words. Compare English *be*, Latin *ibi* "there", *fuit* "it was" < **bhu* "be". Possible remote connection with Maori *whi* "to be able", *whea* "where etc", *hia* "to be in love with". ?

EARTH OVEN : The practice of cooking food on hot stones in holes underground goes back at least 12,000 years, as has been shown by excavations in the Holy Land. Food was stored below ground to protect it from animals. The use of hot stones, left after a fire, made forks, tongs, pots etc unneccessary. It is a Stone Age practice. Maori traditions survive of persons being cooked alive in earth ovens – a cruel and unusual punishment. Curiously Sumerian *umu* means "old woman". Maori *umu* "earth oven".

FEMALE LANGUAGE: Gender discrimination was a feature of early societies. Gregersen (1977) illustrates on pg. 157 a Mokonde woman wearing lip disks, which rendered the production of labial consonants impossible. Even in Homer women are said to speak differently from men. Sumerian has a distinct male & female dialects, differing mainly in choice of words and phonology. Separate West African sign systems were used by men and women. Female languages may be due to exogamy.

LUMPERS & SPLITTERS: There has been a longstanding dispute between those who believe that all human languages came from a single African source (Lumpers) and those who believe in the polygenesis of languages and in isolates (Splitters). Increasing evidence is emerging in favour of the former. Ockham's razor (logic) also supports this position : "principia non sunt...multiplicanda"..

MALAY: It has been said that "The Malay word cannot be assigned definitely to any one of our parts of speech. No hard and fast line exists between the radical used as substantive and the radical used as adjective, for example... Similarly substantive and verb are not always rigidly distinguished... Many words are both noun and pronoun... many are adverb and noun, adverb and adjective, adverb and verb, adverb and conjunction". (Winstedt 1927: 52-53). This is not to say that in context "Malay words cannot be defined as some one part of speech". In general the grammar of Malay is relatively undifferentiated and reflects an early state of affairs.

Malay *ada* means "be, exist", but Maori *ara* means "be awake, have the eyes open" etc. The word derives from PNC *da* "mouth, eat", which also forms the verb "to be" in Basque (*da* "is"). A very old lexeme. Eating was existing. Niger-Congo prefers *di* "to eat" etc. But also has *du* "devour".

"One and the same affix will attach to several different parts of speech." (Winstedt 1927 : 53). In general infixes are fossilised and belong to word formation. Infixes always represent older prefixes or suffixes. Prefixes and suffixes are freely used in Malay, also various kinds of reduplication.

Malay represents an intermediate state between Pre-Proto-Niger-Congo and Maori. Hence its value for comparative explanations. In Maori the old prefixes are opaque and fossilised. Many of the original suffixes have been lost. In Malay prefixes are more vital, but may have been modified.

Thus in Malay prefix *pĕ-* denotes the agent, *pĕ-* with suffix *–an* forms abstract nouns, prefix *pĕr* with suffix *–an* forms verbal nouns from verbs, prefix *kĕ-* with suffix *–an* forms nouns. Prefix *bĕr-* on the other hand forms present participals, prefix *tĕr-* forms past participals, prefix *di-* makes the passive voice, prefix *mĕ-* is used with transitive verbs. The phonetic form of the prefixes may be changed by a following root consonant. I derive these prefixes from Niger-Congo **ba*, **ta* meaning "hand". Suffixes include *–an* (nouns from verbs, thing affected by action), suffixes *–kan* and *–ï* form transitive verbs. See Hendershot & Shellabear (1945: 13). Here *–an* meant "for", *-kan* "make", *-i* (*ki*) "make".

The "punctuation words" of Malay (Winstedt 1927 : § 87) are perhaps to be compared with Māori "euphonic"/"emphatic" particles such as *a,ē, ī, ka, na, rāia* etc. [Compare A. Greek *men, de, gar* etc].

One of the characteristic features of Malay are the Numeric Coefficients, which are among the survivals of an ancient system of noun classifiers. Hendershot & Shellabear in their A Dictionary of Standard Malay (1945) list numeric coefficients (classifiers with numerals). These include: (with the shortened form of "one" *sa-*):

pohon: pohon sa-batang "just one tree"	(trees)
sa-bĕlit (n.c.) *kawat* "just one coil of wire"	(rope, hair)
sa-bĕntok (n.c.) *chinchin* "just one ring"	(rings, fish hooks etc)
sa-biji (n.c.) *tĕlur* "just one egg	(eggs, fruit, chairs, pillows, small objects)
sa-bilah (n.c.) *pisau* "just one knife"	(knives, needles, hatchets etc)
sa-buah (n.c.) *kapal* "just one ship"	(countries, town, lakes, ships, spherical objects)
sa-butir (n.c.) *kĕlapa* "just one coconut"	(small round objects)
sa-ekur (n.c.) *kĕrbau* "just one water buffalo"	(animals, persons especially children)
sa-hĕlai (n.c.) *kĕrtas* "just one sheet of paper"	(thin, flat objects) also *lai*.
sa-kapur (n.c.) *sireh* "a quid of betel nut"	(lime, chalk, whitewash)

sa-kayu (n.c.) *kain* "just one roll of cloth"	(trees, logs, rolls of cloth)
sa-kĕping (n.c.) *roti* "just one piece of bread"	(stone, sugar, paper, wood, bread)
sa-pintu (n.c.) *rumah* "just one house" (of a row)	(doors, gates)
sa-rawan (n.c.) *pukat* "just one fishing net"	(nets)
sa-tangga (n.c.) *rumah* "just one house"	(native houses)

Other cardinal numerals plus coefficient stand after the noun: *anak-ku tiga orang* "my three sons", with *orang* the personal classifier "man". But variations for emphasis occur and *suatu* is used for "one" when great emphasis is required. The form ĕs*a* "one" occurs in old formal texts. The numeral coefficients have not been listed exhaustively. For example *kaki* is used of "insects, umbrellas, of long-stemmed flowers", *patah* of "words" and so on (Winstedt 1927: 129-131).

These numeral coefficients are falling out of use, especially in Indonesian (R. Macdonald, 1976: 82-83). They are the remains of a larger noun classifier system, such as the noun determinants of Sumerian. Note that Bantu prefix 16 *pa* "on" approximately corresponds to Malay preposition *pada* "by, at, in, for, according to".

Malay was once written in an Indic syllabic script which came from South India. But at the present day a Romanised alphabetic script is used. Alongside this there is the Dutch transcription which uses a different orthography, somewhat influenced by the practice of writing Malay in a version of Arabic script. The modern Arabic transcription differs considerably from that formerly used. Both Sanskrit and Arabic have been major influences on Malay.

MAN & ANIMAL: In very early languages no verbal distinction was made between "man" and "animal". Thus PWS *ni, nu* "person" Boritsu *ma-nyi* "person", Sanskrit *Manu* "the first man", Malay *manuk* "bird, fowl", Mande M *kunu* "bird", PWS *ni, nik* "cow" (also *nu*), PWS *nìàm* "beast, flesh", Ewe *là* "beast, flesh", Malay *laki* "man", Tongan *lahi* "big", Lolo, Ngala, Poto etc. *nyama* "animal". Mangbetu *ri* "bird", *ri* "animal", *riai* "strong animal", PWS *li, lu* "head", Sumerian *lu* "man", *alu* "adjective of small beasts", *rúm* "enemy", (the head was typical of men and animals). Eventually the concept developed that men alone had souls (among some African tribes women didn't) and animals did not. Cannibalism treats men as animals (a food source). Slavery reduces men to animals.

MINIMALIST RECONSTRUCTIONS : We have mentioned that **KA, **KI, **KU "hand" suggest earlier ***KV (V = any vowel). But the same problem arises with consonants. Thus **KA, **BA, **TA "hand". This gives us an array of protowords (roots) for "hand". "Hand" included "actions of hand", eg "touch", "count" "throw" etc, adding a third (semantic) dimension to the matrix. The divisions and limits of this dimension cannot be determined. The severity of the problem affects language statistics. If we cannot define and identify our units how can we count them. Are we counting "apples, pears, bananas" indiscriminately ? Synchronic linguistics gives some clarity within a single language. But once we cross language barriers our units are defined by different systems and become incommensurable. We run into problems comparable to Zeno's paradoxes.

MOKO (TATTOO) : The word *moko* means "man" in Mande M. *mòkò* (suffix *–ko*). Mande dialects also have *mogo, moxo, moɔ́o* (I omit diacritics). The *moko* or facial tattoo was normally applied to men; occasionally (mainly later) to women of special importance. Mande for "woman" is *moso, muso, musu,* probably related. The *moko kurī* was an ancient method of tattooing. Figuratively *moko* may mean "person". The word also refers to "lizards", or a "huge mythical creature of lizard-like shape". The reduplicated *mokomoko* means "head". Maori *upoko* means "head", "upper part", with the same suffix as in Fula *gorko* "man". See on Nilo-Saharan. The word *mokopuna* means "grandchild". But in Mangbetu *moko* means "sheath". Bantu *mω* (Johnston) means "one", Fula *mo* "him".

The right hand side of the *moko* normally signifies the father's rank, tribal affiliations and position in life. The left hand side has similar information on the mother's rank, tribal affiliations and position in life. This gender distinction between right side and left side is African. The nose recorded the signature, the chin the *mana*. The chin was the usual position for female tattoos.

NILO-SAHARAN : Niger-Congo is now thought to have developed out of Nilo-Saharan, linking up with Central Sudanic. Blench in Fifth Nilo-Saharan Linguistics Colloquium Proceedings (1995 : 83-130) asks "Is Niger-Congo simply a branch of Nilo-Saharan ?" He mentions ATR Vowel harmony and Labiovelars as phonological evidence. Remnants of noun-class affixes are also considered. He then provides a list of Proto-Niger-Saharan roots : A few of these occur in Māori, eg **kaN** "sharp", M. *kāniwha* "barbed spear", **kur** "stone", M. *kuru* "greenstone ornament", "mallet, pestle", **kum** "navel, belly", M. *puku* "belly, intestines", **bulu** "white", M. *huka* "snow, frost, hair etc", **deNe** "tongue", M. *arero* "tongue", **mor** "fat, oil, grease", M. *momo* "in good condition", **doNa (N-C dum)** , M. *ū* "bite", **nyi** "tooth", M. *niho* "tooth", **(m) ba (CV)** "female breast", M. *uwha* "female", *whaea* "mother, aunt", **pu** "ten", M. *pū* "bunch, double" (two hands). The root **ko** "go" is particularly instructive. Māori has *kō* "descend", *ake* "go", *hoake* "go on", *atu* "direction or motion downwards", *hoatu* "move on", *mai* "direction or motion towards", *hōmai, homai* "bring".

The Māori *ho-* in these combinations must be the old root **ko** "go", used as a serial verb. Serial verbs are found in both Niger-Congo and Nilo-Saharan. Westermann has PWS *kua* "foot, road", *kua* "go". Most Nilo-Saharan reflexes favour *–au-* however. PWS reflexes mostly show "initial" *kp.* Westermann correctly takes these words from *ka* "go" (referring to "hand" or "foot"). Compare PWS *ta* "hand, go", Māori *tae* "arrive", Djula *taɣa* "to go", Bantu *tamba* "to go". I derive the *o* of this root from *ua,* but the *ku-* is an old noun prefix. The original PWS root is therefore, I think, ***kuba** "foot, go". But what of Nilo-Saharan ? Do we have ***ka** as root without prefix, but with a suffix *–ku* instead ? Sound change *au* > *o.* And where does Māori fit in ? Māori has *waewae* "foot" (reduplicated). Guang *de-kpare,* Animere *de-kpare* "foot" explains the final *–e.* These are N-C languages. Is the development *de-ka-pa-le > -kpa- > kua ? Māori *wa-* is from *ua, wa.* Which doesn't look possible in Nilo-Saharan.

The Māori suffix *–ho* is extremely rare, found on nouns, verbs, adjectives etc. The corresponding suffix *–ko* from which it comes is much more common, and is used freely on nouns, verbs, adjectives, adverbs. This is evidence for noun = verb in Māori. Significantly *–ko* forms adjectives in Nilo-Saharan and Basque. The situation in Māori is less straightforward. Māori has a complex use of *mā* ("and, if, for", etc), whereas in Nilo-Saharan *ma* forms relatives. Nilo-Saharan causative *t* is perhaps to be seen on Māori verbs ending in *–tu,* eg *rotu* "send to sleep by magic", *patu* "hit", *motu* "severed", *tatu* "agree". Māori *kamo* "eyelash, eyelid" turns up in Nilo-Saharan : Bagirmi *kamo* "eye, face", Masai *(enk)omon* "face", Songhai : *mo* "eye". In other words there is a relationship, but at a distance. This is what we would expect. Nilo-Saharan shows great variation due to great time depth. It is not as well understood as Niger-Congo. Egyptian (A-A) has *m33* "see", compare Māori *mata* "eye".

NOUNS & VERBS: It appears that the noun is primary in relation to the verb. In Sumerian there is no formal distinction between noun and verb. In Mende too, the same statement applies. But here, whereas all verbs can be used as nouns, there are very few nouns which cannot be used as verbs (Campbell 1991, Mende). In Sumerian noun and verb are formally indistinguishable (Bord 2003:57). But the old determinatives (really classifiers) are all concrete nouns. Many classifier languages use classifiers mainly with numeral + noun combinations. See Winstedt on Malay. The well-known fact that in certain languages verbs have plural forms likewise suggests that verbs were once nouns. Plurality is a feature of things, not actions. Good introductory discussion in Schlauch Gift of Tongues.

NUMERALS: The following numerals are listed for comparison. There are 350 Malayo-Polynesian languages in Melanesia and 300 in Indonesia and Malaya. The number of these languages found elsewhere is much smaller (See Comrie et Alii eds. 2003: 91). Variety is greatest at the source. The numerals are subject to some variation (not shown here). It is important to realise that the first five are most essential. Sumerian for example forms the higher numbers by addition, as does Fulani. Basque regards "four" as top number then has *bost* (based on "one"). The word *la* means "big, man" = 4 fingers. In early times the hand was regarded as having four (not including the thumb) or five fingers. Primitive systems existed in which men counted "one", "two", "three", "many". See Tylor's Primitive Culture, I, "Numerals" (Index). Use of the same numeral system indicates membership of the same social group.

	Malayo-Polynesian			**Niger-Congo**	
	Maori	**Malay**	**Batak (From Sumatra)**	**Mende**	**Bantu**
1.	tahi	satu	sada	yilá	moi,
2.	rua	dua	duwa	felé	bidi
3.	toru	tiga	tolu	sawá	tátu
4.	wha	ĕmpat	opat	nááni	nai,
5.	rima	lima	lima	ló,ó,lu	táanó
6.	ono	ĕnam	onom	wó,íta	túúbá
7.	whitu	tujoh	pitu	wó,fela	pu,nkati
8.	waru	dĕlapan	uwalu	wáyákpánáána	
9.	iwa	sĕmbilan	siga	táálú	bu,já
10.	tekau (ngahuru)	bĕlas	sappalu	pŭ	kúmi,
					[I-E]

Sumerian	**Basque**	**Tagalog**	**Fulani**	**Latin**
1. diš, dili, aš	bat	isá	go'o	unus
2. min	bi	dalawá	didi	duo
3. $eš_5$	hiru	tatló	tati	tres
4. limmu (lammu)	lau	apat	nai	quattuor
5. ía	bost	limá	jow	quinque
6. àš (ía + aš)	sei	anim	jowēgo	sex
7. imin	zazpi	pitó	jowēdidi	septem
8. ussu	zortzi	waló	jowētati	octo
9. ilimmu	bederatzi	siyám	jowēnai	novem
10. u (<*pu)	hamar	sampû	sappo	decem

Numerals are a very good indicator of language relationships, but the interpretation of their history may involve complex problems. A small number of elements were used to construct a variety of systems. The personal pronouns are important for the same reasons. And pose similar problems.

PINKER: Steven Pinker, in The Language Instinct, (1994), argues that human language is an instinct. Just as spiders spin webs so humans speak. A problem here is that language, unlike spider webs, is socially transmitted. Similarily fashions in clothing are socially transmitted, not inherited from parent to child. Pinker's view blurs the distinction between instinct (animals) and culture (humans). I expect he would say, following Chomsky, that we humans have an innate capacity for language. Do we also have an innate capacity to wear clothes? Or to pierce and tattoo our bodies ? And what about wolf boys, who are brought up by wolves and cannot speak any human language? Puberty diminishes the capacity. Human language is thought by some to have originated with a mutation in the FoxP2 gene about 50,000 years ago. Abstract signs are known from c.300,000 BC., writing from the 6th millennium BC (Gimbutas, M.R. 2001: 43). But these early scripts cannot be read. A language gives an identity.

TRADITIONAL MAORI : Maori like all living languages is constantly changing. English has had a huge influence on the vocabulary for example. It is also doubtful whether we will ever recover all the grammatical features used in Maori before the European colonisation. African comparisons can help here, but large areas of ignorance must remain. Some modern Maori speakers use English rhythms and intonation unawares. None speak Maori as their sole language. Outside the home English is used. So Maori is under threat. The position of Hebrew in Israel is not strictly comparable. It is the official language of Israel. Even so it differs greatly from Biblical Hebrew. A. Dalby : "Modern Hebrew differs from the ancient language...in pronunciation...[and]...in vocabulary" because it had to "compromise with the speech habits of its first new users". Likewise we cannot expect Māori to survive without changing. Its main disadvantage is that there is no compulsion to speak it. English reaches a much greater audience, and is better suited to scientific discourse. When told of the plight of the Māori language, according to Elizabeth Gordon, some Mexicans said : "Why would anyone want to speak

Nahuatl ?" One is reminded of the woman with a baby in a pram who asked Dr Johnson "What is the use of Latin ?" His reply : "Madam, what is the use of a baby". Usefulness is in the eye of the beholder.

TRANSFORMATIONS : If one puts consonant grades on a scale of progression it becomes possible to determine how many changes or transformations each of the primary set assumed for the protolanguage has undergone in a given language. . "Transformation" here implies progression in a definite direction from say plosive through to zero (the end point). The same procedure can be applied to the vowels etc. In this way individual languages can be seen as developments away from the protolanguage. Languages with comparable phonological developments will then be more closely related to each other. All innovations are relevant to genetic classification. Unusual sounds standing near the end of a chain of development thus acquire special significance. So do zero (deleted) sounds.

TYPOLOGICAL PROGRESSION : It appears that the earliest languages to leave Africa were classifier languages such as Chinese (and Sumerian). These classifiers developed into prefixes, giving a second stage. Finally the the old prefixes were lost or fossilised, as in Indo-European and Semitic. This is an inference based on evolutionary assumptions about typological language development. More basic is the progression from open CV syllables and reduplication to consonant clusters as in English. This complicates the patterns available. Historically we now have null vowels and null consonants. Some of these are shown in written English. Evolution shows increasing complexity (cell to man).

UTU (Maori) : Vengeance, recompense etc . In early societies, before organised systems of justice, every human death had to be avenged even if the killing was justified or accidental. Vengeance was a religious obligation. "Blood is drunk up by the nourishing earth, but is ineffaceable and cries for vengeance" writes Aeschylus. The reason for this is that the souls of the dead, were in a sense still alive, and demanded it. These souls were part of a family cult. Hence the idea of the vendetta, by which a blood relative of the slayer was slain, so leading to a whole chain of family killings.

In some cases an animal or an animate object such as a spear might be held responsible and punished. Early Mosaic law recognises this. See Newman (1978), Chapter 3, "The Sacred Forms of Punishment".

VERBAL *i* - Prefix: Maori past definites are preceded by the particle *i*. In Sumerian there is a conjugation prefix *i-*, of uncertain meaning. Egyptian also sometimes begins verbs with a prefix *i-*. This looks suspiciously like the remains of a Niger-Congo-Nilo-Saharan noun prefix. Traces of this prefix survive on some Basque verbs. Togo Remnant also has survivals of this element, probably from *yi* "go". Here it is applied to verbal nouns. Mangbetu suffixes *–i* to verbs. Basque has *i* prefixed and suffixed to *ikusi* "see", *ibili* "go" (infinitives).

WORDS ETC : There is disagreeement about word division in Polynesian languages (Campbell 1991). In his course at Cambridge John Lyons required students to define the word. But it is difficult to do this, particularly in languages outside the Indoeuropean group. The ability of speakers to cut the flow of spoken language into words is remarkable, and not at all straightforward. Elision, crasis and enclisis (and much greater problems) go unnoticed by native speakers.

Other units which we take for granted, such as the phoneme, the morpheme and the root also pose serious problems of definition. If this worries you, try asking a mathematician to define the point. The fundamental concepts of both mathematics and linguistics tend to defy definition.

The above notes are thoughts which occurred along the way in writing this research, and illustrate some of the difficulties involved. They are not intended to promote a new linguistic theory. However both my views about reconstruction of lost sounds (Template Theory) and phonological transformation chains involve extensions to the customary comparative model.

MAORI INDEX

Mo. Moriori, R Rarotongan, SI South Island Māori

(This is a guide to the text, not a full scientific lexicon)

A

a		6, 7, 23, 27, 28, 35, 55, 56, 74, 82, 84, 103, 137	**< Particle >**
a'a	**R**	15	**what ?**
aha		15, 59, 136	**what ?**
ahau		39, 45, 50, 106	**I, me**
ahi		6, 77, 80, 98, 115	**fire**
ahu		6, 48, 111	**heap, mound** 6, 111 **move** 48
ai		6, 33, 59, 60, 84, 106, 137	**< Relative, Prefix >**
a'i	**R**	98, 132	**fire, light**
a'i-ta'u	**R**	98	**fire in native oven**
ai-metua	**R**	30	**elder relatives**
aitanga		30, 35, 84	**descendants**
aitu		30	**sickness, demon** 30
aitu	**R**	123	**god, demi-god, spirit**
Aitu	**R**	123	< **eastern tribes >**
aituā, aitō		30, 131	**omen, calamity**
ai-tuaine	**R**	30	**elder sisters**
ai-tuakana	**R**	30	**elder brothers**
ai-tungane	**R**	30	**male members of woman's family**
ai-tupuna	**R**	30	**ancestors**
Aitutaki	**R**	123	**< placename >**
? aka	**R**	91	**dance**
Akaloa	**SI**	70	**< Placename >**
Akaroa	**SI**	70	**< Placename >** ***aka = whanga*** "harbour"
ake		39, 48	**up, go**
aki		23, 48, 87	**boy** 23, 87 **dash against** 48
akire	**R**	87	**captive, pet pig**
ako		48	**split**
akoranga		18	**doctrine, teaching**

aku	6	**delay, take time**
aku	16	**my**
ana	33, 47, 48, 51, 128, 132, 136	**< Particle >**
anā	132	**there**
anamata	6	**hereafter**
anao	103	**expression of assent**
Anawhakairo	61	**< Proper Name >**
anganga	16, 18	**aspect**
angānga	16, 18, 121	**head, skull, chief**
ani	13	**resounding**
anini	13	**giddy, aching**
ānini	13	**giddy, aching**
anō	33, 58	**again < Particle >**
anu	38	**cold**
anuanu	38	**cold**
ao	91, 94	**dawn** 91 **mother earth** 94
Aokautere	61	**< Proper Name >**
apa	23, 25	**slave, spirit** 23 **work group** 25
apaapa, apaapatū	100	**heap**
api	77, 98	**oven**
apo	100	**put into heap**
apu	125	**gust of wind**
ara	18, 53, 74, 94, 110, 117	**road** 18, 53, 74, 94, 117 **awake** 110
ara-hi	53	**lead, escort**
Arahura	61	**< Proper Name >**
Aratoro	61	**< Proper Name >**
Arawa	71	**< canoe, tribe >**
arawhata	18	**bridge, ladder**
arero	131	**tongue**
ari	38	**clear, visible**
ari	100	**mythological food**
ariki	23	**first born, chief, priest**
aru	51	**chase**
aruhe	117	**fern root**
aru-m-ia	51	**< Passive of aru >**
ata	91, 92	**early morning**

atarau	110	**moonlight**
atu	7, 39, 114	**< Particle >**
atua	30, 38, 87, 123	**god, supernatural**
au	45, 106, 120	**I, me**
aua	114, 122	**I know not**
auahi	122	**smoke**
awa	116	**stream**
awahau	45, 46	**I, me**
awatea	91	**broad daylight**
awau	45, 106	**I, me**
awe	102	**hair strands**

Ā

ā	15, 23, 31, 56, 57, 81, 83	**what ?**
ā **R**	15	**four**
āe	59, 60	**yes (no, affirms negative)**
āhuatanga	18	**circumstance**
āhukahuka	13	**resemble, recognise, approach**
āhumehume	13	**pleasing, woman's garment**
ākonga	18	**scholar**
āku	16, 45	**my**
āna	45	**of him, of her**
ānau	48, 89	**wander**
ānina	13	**giddy, aching**
āninanina	13	**giddy, aching**
ānini	13	**giddy, aching**
ānininini	13	**reeling**
aouou	77	**a simpleton**
āpū	31	**flock, crowd**
ātāhua	18	**handsome**
āti	23, 132	**offspring**
ātua	42	**first**
āu	46	**of thee**
āwangawanga	18	**anxious**
āwhā	116	**rain, gale, storm**
āwhai	25	**spouse**

E

e	32, 42, 43, 44, 47, 49, 54, 56, 59	**< Verb Particle >**
e ... ana	6	**< Verb Particles >**
ehara	58	**not**
ehu	48	**disinter**
e kai	69	**< Vocative >**
eke	39, 48	**to mount** 39 **to embark, land** 48
ene	48	**flatter, cajole**
epa	48	**throw**
e rangi	37	**sir**
e tai	69	**< Vocative >**
eti	48	**shrink**
ewe	121	**afterbirth**

Ē

ē	26, 30	**< Particle >**
ēna	30	**those**
ēnei	30	**these**
ēra	30	**the others**
ētahi	26	**some, certain**

H

haere	7, 13, 32, 52, 89, 13	**come, go**
hāereere	13	**go about**
hahae	91	**cut**
haka	91	**dance**
hakahaka	120	**short in stature**
haki	38	**meek**
hanga	109	**make**
hāngi	115	**earth oven**
hapī	98, 115	**oven**
hau	138	**wind**
haumākū	136	**wet**
Hawaiki	7	**< Mythical place >**

he	7, 26, 32, 39, 50, 59, 123	**< Indef. Particle >**
hea	58	**mourn, grieve**
hea ?	136	**where, how many ?**
hei	27, 53, 106, 139	**< Loc. Particle >** 27 106 **go, tie** 53 **with** 139
heke	82	**felling axe**
heketua	26	**privy**
hemo	92	**die**
here	7, 130	**to tie up**
heru	26	**hair comb**
hewa	26	**bald**
hi	28	**abstain**
hī	98	**to fish**
hia	42, 136	**how many ?**
hine	73, 139	**girl, woman**
hinu	96	**fat, grease**
hiwi	86	**descent**
hō	60	**pout**
hoa	11, 106, 138	**companion** 11 **husband** 106 **spouse, wife** 138
hoahoa	11, 138	**spouse, two wives of same husband** 138
hoake	48, 163	**give** 48 **go** 163
hoatu	48, 101, 163	**give** 48, 101 **go** 163
hoe	127	**to paddle**
hoea	127	**an oar**
hoki	81	**and**
hōmai, homai	48, 101, 163	**give** 48, 101, **bring** 163
hongi	103	**to press noses, to hear**
hono	7	**meeting place**
hopohopo	18	**apprehensive**
hou	97	**feather**

hōu, hou		113	**new, recent, fresh**
hū		90	**to boil**
hua		95, 101	**egg** 95 **fruit** 101
huata		123	**spear**
huhua		109	**many**
hui		56	**meet**
huka		137, 163	**foam, frost, snow, hair**
huki		90	**roast on spit**
hunuhunu		90	**to grill**
huruhuru		97, 102	**feather** 97 **hair** 102

I

i		7, 27, 47, 49, 54, 56, 139	**< Particle >**
ia		23, 45, 103, 126,	**he, she** 23, 45, 103 **stream, current** 126
iaia		66, 133	**sinews, veins, artery**
iere		121	**singing**
ihi		24	**power, incantation**
iho		24, 39, 133	**umbilical cord** 24 133 **lock of hair** 133 **heart** 133 **down** 39
ihu		24, 114	**nose**
ika		24, 38, 98	**warrior, troop** 24 **tight** 38 **fish** 98
ikeike		38	**lofty**
ina		80, 87, 98 103	**warm onself**
inā		136	**when**
inapō		122	**last night**
’ina’ina	**R**	80, 87	**to singe**
ingoa		32, 112	**name**
inu		49, 93	**drink**
inumia		51	**be drunk**
io		110	**portion of flesh**
Io		141	**the Supreme God**
ipo		25	**darling**

iri	102, 117	**to hang, be suspended**
i te	6	**< Past Particle >**
iti	38, 80, 122	**small**
iwa	42, 113	**nine**
iwi	86, 115	**bone, people**

K

ka	7, 22, 40, 42, 43, 47, 49, 51, 58, 59	**< Particle >**
kā	58, 80, 87, 115	**not** 58 **burn** 87, 115, **on fire** 80
kāhore	51, 58, 114	**not**
kai	12, 35, 69, 82, 89, 93, 100	**eat, food** 12, 35, 100 **men** 69 **at** 82 **arrive** 89 **drink** 93
kai-	54, 109	**< Agentive prefix >**
kāī	132	**type of tree**
Kaiapoi	100	**< Placename >**
kai-hanga	54	**maker**
kai rākau	109, 135	**armed men**
kaka	12, 89	**flutter**, 12 **clothing** 89
kākahu	89	**clothing**
kakai	12, 85	**eat frequently** 12 **bite** 85
kakakaka	12	**stammer**
kākano	120	**seed**
kākāriki	38	**green parrot**
kakī	113	**neck**
kāmaka	125	**rock**
kame	77	**eat**
kamo	95	**eyelash, eyelid**
kamonga	95	**eyelash**
kamu	77	**eat**
kana	10	**witchcraft**
kanakanaia	10	**witchcraft**
kanaku	87, 98	**fire**

kanapu	16, 98	**lightening**
kānara	16	**candle**
kane	103	**head**
kanikani	91	**to dance**
kāniwha	164	**barbed spear**
kanohi	18, 56, 95	**eye** 18, 95 **face** 56
kāo	58	**no**
kapa	91	**line**
kāpō	85	**blind**
kapua	89	**cloud**
kāpunipunitanga	7	**meeting place**
kāpura	98	**fire**
kara	77	< **Vocative** >
karakia	77, 119	**incantation, spell**
karanga	49, 50, 77, 119	**call** 49, 77 **call out** 119 **holding** 50
kararehe	81	**animal**
kare	77, 119	**< Vocative >**
karere	77, 119	**messenger**
kari	92	**dig**
karu	95	**eye**
kata	107	**laugh**
ka tahi	42	**one**
katea	79	**large double canoe**
kati	66, 79	**to fasten**
katoa	81	**all**
kau	127	**swim**
kauhoe	127	**swim**
kaurimarima	102	**a pointed piece of wood, firestick**
kautāhoe	127	**swim**
kawaka	132	**NZ cedar tree**
ke	49, 58	**< Particle >**
kē	39	**different**
kei	27, 49, 50, 58, 82, 106, 139	**< Loc. Particle >** 27, 106 **< Motion Verb >** 49, 50 **< Negative >** 58 **at** 82 **with** 139

kei te	6, 49	**< Verb Particle >**
kererū	115	**pigeon**
keri	92	**dig**
kete	83	**basket**
ki	7, 27, 56, 66, 82, 106, 110, 115, 139	**< Loc. Particle >** passim **towards** 56 **if** 106
kī	36, 50, 119	**full, crowded** 36 **say** 50, 119
kia	50	**let**
kīaka	29	**calabash**
kiāno	58	**not yet**
kihau	29	**sprit**
kihikihi	18	**cicada**
kī-ia	50	**be said**
kīkī	119	**say**
kikiri	115	**begin to grow**
kiko	29	**flesh**
kikokiko	110	**meat**
kino	38	**bad**
kiore	29, 116	**rat**
kipa-kipa	133	**ornamented flax cloak**
kīrehe	29, 93	**dog**
kiri	29, 115	**skin, bark** **person** 115
kirihau	80	**ritual oven**
kirikiri	18, 102, 118	**gravel** 18 **basket** 102 **sand** 118
kiritoi	29	**sty**
(k)ita	102	**tightly clenched**
kite	18, 56, 107, 119	**discover** 18 **see** 56, 119 **know, see** 107
ko	7, 31, 42, 49, 82	**< Particle >** 7, 31, **at** 82
kō	17, 28, 60, 73, 92, 110, 119, 139	**form of address to girl** 17, 60, 73, 139 **yonder, place** 28 **hoe** 92, 110 **bird singing, shout** 119

koā	119	**indeed**
koe	7, 39, 46, 129	**you (sg.)** 7, 39 **thou** 46, 129
kōhiwi	115	**skeleton, corpse**
kohu	22, 99	**fog**
kōhua	115	**Maori oven**
kōhue	90	**to roast**
kōhungahunga	22, 80, 87	**child, infant**
kōhuru	106	**to murder by stealth**
koi	104, 120	**sharp, wound with spike**
kōiwi	86, 115	**bone, people**
kōkā	111	**biological mother**
kokiri	123	**spear**
kōkō	104	**dig with a hoe**
kokoi	104	**sharp**
kokoro	139	**old man**
kokoti	91	**cut**
kōmā	137	**whitish**
kōnā	28	**that place**
kōnei	28, 104	**this place, here**
kōnui	130	**thumb, big toe**
kōpara	34	**bell bird**
kōpikopiko	7	**meander**
kōpu	84	**belly**
kōpura	120	**seed**
Kōpūriki	84	**< Placename >**
kore	114	**not**
kōrero	77, 119	**speech** 77 **tongue** 119
koro	139	**old man**
korohū	90	**to steam**
korokoro	97	**finger**
koromatua	130	**thumb**
koropupū	90	**boil**
kōrua	46, 141	**you two**
kotahi	42	**one**
koti	91	**cut**
kōtiro	87	**girl**

kōtore	128	**buttocks**
koutou	31, 46, 141	**your, you (pl.)**
kōwhatu	22, 125	**stone**
kua	47, 49	**< Particle >**
kuaka	115	**godwit**
kūaha	101	**gateway, entrance**
kui	139	**woman**
kuia	139	**old woman**
kuiakuia	139	**old woman**
kuikui	139	**old woman**
kūkū	12, 115	**pigeon**
kukume	115	**pull**
kūkupa	12, 115	**pigeon**
kūmara	3, 18, 34, 140	**sweet potato or yam**
kumi	11, 29	**ten fathoms**
kumikumi	11	**beard**
kūmore	28	**headland**
kūreitanga	28	**point of the nose**
kurī`	7, 29, 93, 116	**dog**
kuru	164	**greenstone ornament, mallet, pestle**
kūwaha	28, 101	**gateway**
kūwhā	28	**thigh**

M

ma	23, 32, 55, 57, 81, 106	**< Particle >**
ma-	54, 123	< **Prefix >**
mā	23, 81, 83	**< Particle >**
mā	137	**white**
maero	136	**channel, float**
maha	23, 81, 90, 104, 109, 127,	**multitude, many,** 23, 81, 104, 109 **steam** 90, 127
mahaki	16	**meek, mild**
māhaki	16	**abate**
māhanga	23, 133	**twins**
mahana	134	**warm**
maharatia	129	**think**

mahi		12, 16, 54, 140	**work**
māhī		16	**ferment, putrefy**
māhina		110	**moon**
mahine	**Mo.**	15, 139	**woman**
mahiti		87	**spent**
mahu		16	**healed**
māhū		16	**gentle**
mahue		87	**left behind**
māhunga		102, 103	**hair of head, head**
mai		35, 89, 132	**hither, towards**
maihi		23	**facing boards of gable**
maikuku		88	**claw**
maka		77, 130	**throw**
makai		94, 112	**keep eating portions**
makariri		89	**cold**
makawe		23, 102	**hair of head**
make		77	**throw**
mākū		23, 99, 136	**wet**
mama		12	**perform rites**
mamaha		127	**stream**
mamaoa		127	**stream**
manawa		84, 98, 103	**belly, heart, breath, mind**
manea		141	**place for food for gods**
manga		38, 102, 116, 135	**stream** 38, 116, 135 **branch** 102, 135
māngai		112	**mouth**
Mangatini		38	**many streams**
mangu		102	**black**
mano		23	**multitude**
manu		23, 65, 66, 71, 84, 95	**bird** 23, 66, 71, 84, 95 **leader, chief** 65
mānu		23, 99	**afloat**
manu a Tiki		66	**man**
manu(w)hiri		36, 66	**guest(s)**
manukura		66	**chief**
manumea		66	**sacred bird**
manuwhiri		66	**visitors**

maoa		90	**cooked**
Māori **Maori**	**(E)**	*passim* *passim*	**Native, belonging to New Zealand**
māota		102	**green**
māpu		23	**herd**
marae		110	**meeting place**
marama		110	**moon**
mārama		110	**light, not dark**
marangai		23	**rain**
mata		11, 23, 95, 127	**eye** **swamp, surface** 127
mataku		97	**death**
matamata		11	**eye, face, point**
mātao		89	**cold**
matapō		85	**blind**
matarau		123	**spear**
Matariki		23, 36	**Pleiades, Seven Sisters**
matau		82, 116	**hook, right side**
mātau		107, 119	**know, see**
mate		92	**die**
mātenga		103	**head**
matikuku		88	**claw**
matomato		102	**green foliage**
mātou		46, 135	**we (they & I)**
matua		14, 97, 111	**parent**
mātua		14, 42	**parents**
māturuturu		99	**drip**
mau		51, 87	**caught**
māua		46, 135	**we two (he & I)**
mauī		108	**left hand**
maunga		111	**mountain**
mauria		51	**be brought**
me		57, 58, 81, 106, 139	**and, with** 57, 81 **if** 106 **with** 139 **< With Imperatives >** 58
mea		32, 129	**thing , think** 129
meangauru	**Mo.**	43	**ten**
mehemea		106	**if**
mene		18	**assemble**

mere	32	**greenstone club**
miha	24	**distant descendant**
mikao	24, 97	**finger**
miki	24	**buttocks**
mimiki	24	**ridge**
mimiko	24	**young shoot**
mimira	24	**lashing**
mimiti	24	**low water**
mine	18	**assemble**
miri	24, 118	**cloak** 24 **rub** 118
miro	24	**thread**
mo	55, 83	**< possession>** **because** 83
moa	101	**dinornis**
moana	119	**sea**
moe	122	**sleep**
mohe	77	**soft**
mohi	77	**sleek**
mōhio	107	**know, see**
moko	14, 109	**facial tattoo**
momi	126	**suck**
momo	96	**fat**
mōmona	96	**fat, fertile**
momoto	85	**strike with fist**
Moriori	15, 43, 86, 121, 142	**< Ethnic >**
moto	51, 85	**strike with fist**
motokia	51	**to be struck**
motomoto	85	**strike with fist**
motu	52, 140	**cut** 52 **broken** 140
motukanga	52	**cutting**
motukia	52	**be cut**
mū	66	**insects**
mua	28	**the front**
muanga	24	**elder, elder child**
muka	24	**flax fibre**
muku	138	**wipe**
mūmū	66	**large green beetle**
mumura	24	**to glow**
mura	24	**flame**

murare	24	**vagrant**
mūrau	24	**byword**
muri	24, 28, 83	**the rear, back**
muringa	24	**youngest child**
muru	138	**wipe**
mutu	51, 140	**cut short**

N

na	6, 22, 32, 55, 59, 83, 128	**< Particle >**
nā	111	**< Particle >**
nāku	45	**mine**
namata	6, 28	**long ago**
nānā	111	**to nurse**
nanahi	28	**yesterday**
nanu	119	**murmur**
napō	28	**last night**
nau	89	**come, go**
nē	58	**< Particle >**
neha	47	< **Particle >**
nehe	47	**< Particle >**
neherā	28	**the ancient times**
nehi	28	**the ancient times**
nei	31, 3, 37, 59, 129	**this** **near speaker** 33 **< Relative Pr. >** 59 **here** 129
niho	131	**tooth**
ninipi	112	**small**
nipi	112	**small**
no	6, 32, 55, 83, 106	**< Particle >**
nō	58	**< Negative >**
noho	109, 121	**dwell, live** **sit** 121
nōku	45	**mine**
nui	7, 11, 38, 40, 65, 84, 137	**big** 7, 11, 38, 65, 84, 137 **total** 40
nunui	10, 11	**big (pl .)**

NG

ngā		7, 22, 26, 31, 37, 103, 133	**< Particle >**
ngahere		140	**woods**
ngahuru		42, 128	**ten**
ngaki		92	**dig**
ngako		96	**fat, grease**
Ngati		84	**< Proper Name >**
ngau		85	**bite**
ngāuranga		22	**people who came by canoe**
ngauru	**Mo.**	43	**ten**
ngiha		87	**burn**
ngirangira		102	**hand**
ngita		102	**fast, secure**
ngohi		98	**fish**
ngoe	**R**	98	**to catch**
ngote		126	**suck**
ngutu		112	**mouth**

O

oka		124	**stab**
onepu		118	**sand**
ono		41, 72	**six**
oneone		94	**mother earth**
ope		81	**troop**
ora		37, 51, 109	**slave** 37 **well in health** 51 **live** 109
oru		77	**thick**
oruoru		77	**few**
otaota		102	**green**
oti		51	**finished**
otinga		7	**destiny**
ou	**R**	77	**payment**
ouou	**R**	77	**silly**
ouou		97	**few**

Ō

ō	6, 7, 31, 55, 58, 74	**< Particle >**
ōku	45	**of me**
ōna	45	**of him, her**
ōu	46	**of thee**

P

pā	6, 25, 51, 55, 100, 104, 126, 132, 134	**sir** 6, 25 **struck** 51, 126 **touch** 55, 132 **hit** 104 **fortified village** 134 **clump** 100
pae	100	**be collected together**
pahaki	28	**the near distance**
pahī	16	**ooze**
pāhi	16	**gloomy**
pāhī	16	**strike**
pāhuki	28	**screen of brushwood**
pai	32, 35, 38, 101	**good**
paiaka	117	**fern root**
paihau	138	**wing**
pāiri	28	**washboards (canoe)**
paka	10	**scraps, provisions**
Paka	7	**< Proper Name >**
pākai	28	**bulwark**
pakapaka	10	**scraps, provisions**
pākau	138	**wing**
paki	101	**fine (weather)**
pakiaka	117	**fern root**
pakohe	38	**dark grey stone**
pakuru	126	**broken**
pāmamao	7	**distant**
pane	103	**head**
panga	130	**throw**
pango	11, 34, 38	**black, dark**
paoa	34, 122,	**smoke**
papa	93	**calabashes, bowls, boxes, buttocks**

pāpā		11, 97	**father, uncle, mother**
papango		11, 38	**dark, darkish**
pāpara		11, 34	**true father**
Pāpāringa		93	**< Proper Name >**
paparua		93	**double**
para		34	**blood relative**
parirau		138	**wing**
paruparu		92	**dirty**
pata		77, 93, 99	**drop, drip, raindrop**
pātaka		134	**storehouse**
patapata		93	**to drip, drop**
pātata		12, 113	**near**
pātere		99	**flow**
patī		77	**splash**
patu		104, 106	**hit** 104 **kill** 106
patu	**R**	125	**stone wall**
patui		120	**needle**
pao		126	**stake**
pe'e	**R**	17	**old historical song**
peha		17	**proverb**
pēhea		59	**< Interrocative >**
pehipehi		17	**to ambush**
pepe		87	**attract birds by imitating their cry**
pere		87	**riddle**
pēwhea		105	**how ?**
pi		95	**eye**
pī		66, 80, 88	**young bird** 66, 88 **young fighting man** 80, 88
pīari		29	**hunchback**
piau		29, 82	**axe**
piharoa		29	**European hatchet**
piharongo		29	**hard black stone used to make implements**
pihe		29	**girdle**
pikari		29	**chick**
piki		97	**hair, feather**
pīnaki		29	**war canoe**

pingau	29	**strings of mat**
pīnohi	29	**sticks, tongs**
pio	29	**young of kiwi**
pioe	29	**dry firewood**
pīoi	29	**song sung while brandishing scalps**
pipi	29	**small wedge**
pirau	84, 94, 117	**decay, putrid, rotten**
piri	102	**to be attached**
pīrori	29	**toy hoop**
pitau	82	**war canoe**
pito	112	**navel**
pito-toto	112	**blood relation**
pō	90, 113, 122	**to crowd around, throng** 90 **night** 113, 122
poa	101	**food, bait**
pohe	122	**blind, dead**
pōhea	85	**dull, stupid**
poho	84, 86, 124	**breast, belly**
poi	100, 118	**(make into) a ball**
poko	17, 105, 113	**extinguish** 17 **hole** 105, 113
popo	117	**rotten**
popō	17, 90	**crowd around, throng**
popohe	12, 17, 85	**stupid, blind**
popoto	120	**short**
poroporo	118	**bracelet**
porotaka	118	**circle**
porowhita	118	**circle**
pōwhatu	22, 125	**stone**
pū	31, 40, 124, 132	**double, bunch, pair, stack,** 31, 40, 124 **tribe** 132 **root of tree** 132
pua	15, 38, 91, 99	**flower, bloom, foam** **smoke** 15, 38, 99 **hold up head or heart of enemy** 91
pūaho	38	**intensely white**

pūao		91	**dawn**
pūāwai		99	**flower**
puhi		85	**wind**
puia		90	**hot spring**
puihi		140	**woods**
pūkanohi		18, 95	**eye** 18 **staring eye** 95
puke		111, 124	**hill**
pukepuke		111	**mound**
pūkohu		22, 99	**fog**
pūkonohi		18, 95	**eye**
puku		84, 127	**belly** 84 **swell** 127
puna		34, 124	**spring**
punga		81	**tree fungus**
pungarehu		81	**ashes**
pupuhi		85, 125, 127	**blow** 85 **to blow** 125 **to swell** 127
pupuri		15, 50, 105	**hold, take**
pūranga		124	**heap**
purapura		120	**seed**
puri		105	**hold, take**
puritia		15	**to be held**
puru		102	**curly (of hair)**
pūrua		41	**to do twice**
puta-i'u	**R**	114	**nose**
putangi'u	**R**	114	**nose**
pute		124	**basket**
putiputi		99	**flower**
pūweru, pūeru		89	**clothing, cloak**

R

ra	59	**< Particle >**
rā (ra)	3, 7, 34, 77, 92, 93, 110, 118, 119, 127, 129, 131	**day, sun** 3, 7, 92, 110 131 **there** 7**,** 34, 129, **I pray you** 119 **sail** 118, 93

			make dull sound 77
rae		34, 37, 94, 108	**person** 34, 37, **headland** 94, 108
ra?i	**R**	84	**numerous**
rāia		161	**< interjection >**
raha		108	**extended**
raharaha		108	**spread out**
rahi		84, 108, 160	**large** 84, 108 **slave, other p.** 160
raka		89	**go**
rākau		69, 125	**armed men** 69 **rod, stick** 125
raki		121	**weather**
rama		131	**torch**
rana		35	**net**
ranga		37	**company of persons**
rangatira		7, 37	**chief**
rangi		91, 121	**sky, weather**
rangona		103	**be heard**
rara		92	**dry by fire**
rarā		77	**make dull sound**
rārā		34	**there**
raranga		18	**plait**
rarawhi		105	**hold/take**
rata		120	**sharp**
rātou		45, 129	**they**
rau		105, 107	**hundred** 105 **leaf** 107
rāua		45, 129	**they (dual)**
raupō		77	**seed**
rawa		39	**< Intensive >**
rawhi		105	**hold, take**
remu		128	**buttocks, tail**
reo		77	**language**
rere		18, 80, 93, 96, 99	**flow** 18, 99 **sail, fold** 93 **water** 80 **fall** 96
rererua		93	**double**
rewa		99	**float**
rie		40, 41, 133	**two**

rienga		40, 133	**two**
rikarika	**SI**	102	**five**
riki		112, 122	**small**
rima		41, 99, 102	**five**
ringa		11, 56, 102	**arm, weapon, hand**
ringaringa		11, 22, 102, 103	**knucklebones, fingers, hands** 102, 103
riri		97	**be angry**
ririki		10, 112	**small (pl.)**
roa		7, 11, 109	**long, length** 7, 109 **tall** 11
rongo		11, 103	**feel, hear, smell, taste**
rongona		103	**be heard**
roro		124	**fire sticks**
roroa		11	**tall (pl)**
roromi		124	**squeeze**
roto		27, 107	**lake** 107 **the inside** 27
rua		40, 46, 72, 93, 133	**two**
ruahine		139	**old woman**
ruaki		134	**vomit**
Ruamāhanga		43	**< Proper Name >**
rua māhanga		43	**two forks**
Ruapuke		43	**< Proper Name >**
rua puke		43	**two hills**
ruarua		43	**a few**
ruha		77	**weary**
ruhi		77	**exhausted**
rumaki		53	**dip in water, bury plant**
runga		27	**the top**

T

tā		31	**< Particle >**

tae	56	**to arrive**
tahā	77	**calabash**
tahaki	27	**the shore**
tahatai	27	**seashore**
tahe	127	**current**
tahē	77	**calabash**
tahi	26, 27, 35, 40, 114	**one** 26, 40, 114 **slope** 27
tahirā	28	**day after tomorrow**
tāhoru	118	**sand**
tahu	80, 90	**light fire, to roast**
tāhuna	77	**pappus of raupō seed**
tāhune	77	**pappus of raupō seed**
tai	3, 10, 27, 30, 35, 38, 109, 119	**sea, coast, tide** 3, 10, 35, 38, 119 **sea** 27 **< Vocative >** 109 **inhabitant** 30
taiao	3, 30	**country**
taikaumātua	30	**adult**
taikuia	30	**old woman**
taimaha	104	**heavy**
Tainui	38	**< Proper Name >**
taitai	10	**sea, wave**
taitamariki	30	**young person**
taitapu	30	**< Obstacle >**
taitata	12	**near**
taitua	27	**the farther side**
taka	96	**fall**
taki	26, 35, 40, 90, 114, 125	**rod** 26, 35, 40, 114, 125 **rod, recite** 90
takirua	42	**two (distributive)**
takitahi	42	**one (distributive)**
takoto	108	**lie down**
tama	38, 87, 97, 106	**son, man, (vocative)**
tamahine	87	**girl**
tamaiti	36, 38, 80, 87, 122	**child**
tamariki	36, 80, 87, 122	**children**
tana	16	**his, hers (neutral)**
tāna	16	**his, hers**

tāne		16, 69, 80, 97, 106, 109	**male, husband**
tangata		7, 14, 39	**man**
tāngata		14	**men**
tanu		53	**bury**
tanumanga		53	**plantation**
tanumia		53	**be buried**
tao		40, 90, 123	**spear**
tapahi		91	**cut**
tapu		31	**restricted (religious)**
taputapu		31	**goods**
tarawāhi		27	**the other side**
tāria		15	**wait (passive)**
tarika	**SI**	94	**ear**
taringa		22, 94, 102, 103	**ear**
taringa-meika	**R**	102	**hands of bananas**
tarutaru		102	**green**
tata		12, 113, 123	**near, soon**
tātahi		27	**the sea shore**
tatari		15	**to wait**
tātata		12	**near**
ta te mea		83	**because**
tatau		90	**count**
tātou		46, 135	**you & I**
tau		82, 90, 121, 141	**attack** 82 **count** 90 **song** 121 **year** 141
taua		81, 82	**army**
tāua		7, 46, 135	**you & I**
taumaha		104	**heavy**
taura		117	**rope**
tauriki		60	**< cry of distress, surprise >**
tuauriuri		36	**many**
taute		111	**mourn, bring to perfection**
tāwāhi		27	**the other side**
tawhiti		27, 96, 112	**the distance, far**
tawhito		114	**old, ancient**
te		7, 22, 26, 32, 38, 39, 44, 49, 50, 84	**< Particle >**
tē		30, 31, 58	**< Article >**

tea		137	**whitish**
tearuaru	**Mo.**	43	**ten**
teewe	**Mo.**	121	**womb**
tekau		42, 128	**ten**
tēna		30	**that**
tēnā		34, 128	**there**
tēnei		30, 31, 129	**this**
tēpu	**(E)**	31	**table**
tēra		30, 32	**the other**
tērā		7, 128	**that**
tētahi		26	**one, some**
ti		53	**a shoot, child**
tī		125, 132	**stick (throw, o.v.)**
tia		84, 132	**peg, drive in pegs** 84 **a stake** 132
tiaka		84	**parent**
tihi		35, 126	**top** 35 **summit** 126
tika		126	**straight, dart**
tiketike		126	**height, high**
tiki		13, 35, 53, 65, 84	**fetch** 13 **topknot** 35, **primeval man** 35 **ancestral image** 53, 84 **(bird embryo)** 65
tikitiki		126	**topknot**
tīkina		13	**be fetched**
tikitiki		35	**girdle**
tini		36, 38, 109	**very many**
tino		39	**quite**
tipi		11	**push**
tipitipi		11	**push-hoe**
tipua		125	**goblin, demon**
tipuna		125	**ancestor**
tira		132	**mast, pole**
titaha		10	**lean to one side**
titaka		10	**wobble**
tītaka		12	**unsteady**
tītakataka		12	**turn over and over**
titi		132	**peg**
tītī		125	**sticks (throw, o.v.)**

to		31	**< Particle, Article >**
tō		80, 115	**wet, gush** 80 **pull** 115
toa		81, 101	**warrior, male**
toetoe		10	**grass, thatch, shingles**
tohunga		88, 90	**instructor, expert**
toimaha		104	**heavy**
toka		125	**rock**
toki		82	**axe**
toko		42, 43	< **Personal Countword >**
tōku		32	**my**
tōna		32	**his, her, its**
tope		88, 91	**cut, cut off**
tōpū		31, 40	**pair**
toro		11	**reconnoitre**
torotoro		11	**scout**
toru		11, 41, 46, 77, 129	**three**
torutoru		11, 43, 77, 97, 135	**few**
tōtika		126	**straight**
toto		18, 19, 85	**blood**
tōtō		88	**chip, chop**
tourea		125	**?** (Reed 2002: 166)
taurea	**Mo.**	(cf 125)	**trickery**
tū		108, 124, 140	**be high of sea,** 108 **part of fishing net** 108 **stand up** 124 **wounded** 140
tua		27, 44	**the other side** 27 **< Ordinal Prefix >** 44
tuahine		139	**elder sister**
tuatahi		42	**once**
tuha		123	**to spit**
tuhi		120	**to decorate**
tui		120	**sew**
tuitui		120	**sew**
tuki		120, 140	**to push** 120 **strike** 140

tuna		35	**eel**
tunu		90	**to roast**
tunutunu		90	**to grill**
tupua		125	**goblin, demon**
tūpuhi		125	**storm**
tupuna		34, 125	**ancestor**
turi		107	**knee**
turuma		23, 94	**faeces**
tūtae		94	**dung**
tūtū		108, 125	**full tide** 108 **tree (snaring birds)** 125
tuwha		123	**to spit**

U

u	**R**	110	**breast, udder, milk**
ua		74, 83, 108, 113, 116, 135, 136	**when** 74, 136 **backbone** 83 **rain** 108, 116, 135 **neck (back)** 113 **gale, storm** 116
ua	**R**	15	**flower**
uaua		66, 133	**sinews, veins**
Uenuku		24	**< Proper Name >**
uha		24	**female element**
uhi		18, 24, 140	**yam** 18, 140 **tattooing needle** 24
uho		24	**heart, pith of tree**
ui		119	**enquire**
uku		24, 138	**a fish** 24 **wipe** 138
uma		24, 86	**bosom**
umaraha		38	**wide**
umu		24, 115	**earth oven**
unu		93	**drink**
upoko		11, 103	**head**
ura		24, 114	**glowing** 24 **not** 114
uraka		114	**not**
uranga		24, 28	**glow** 24 **pillow** 28

ure	24	**penis**
uretū	24	**father, male relative**
uri	24, 38	**offspring** 24 **dark green** 38
uriuri	36	**offspring, race**
uru	24, 26, 102, 103	**head, chief** 24, 26 103 **hair** 102
uta	109	**inland, land**
utu	24, 28, 104	**revenge** 24, 104 **front of whare** 28
uwha	6, 25, 139	**female animal or sow** 25 **woman** 6, 139
uwhi	140	**yam**

Ū

ū	80, 86, 107, 108, 110, 164	**water** 80 **breast** 86, 108 **arrive by water** 107 **teat** 110 **bite** 164
ūa	74	**< Particle >**
ūta	27, 28	**the inland, dry land**

W

wā	121	**accuse**
waewae	100, 108, 123, 134	**foot** 100 **leg** 108 **divide** 123 **leg, foot, footprint** 134
waha	112	**mouth**
wāhi	86	**break**
wāhia	123	**split** 123
wahine	14, 15, 46, 111, 138, 139	**woman** 14, 46, **girl** 15, 139 **female** 111 **companion, spouse** 138

wāhine	14, 15, 46	**women (pl)**
wāho	27	**the exterior**
wai	35, 80, 108, 135, 136	**water, (+ *ū*) milk**
wai ?	59, 137	**who ?** 80, 137
waiata	56, 121	**song, sing**
waipuke	125	**flood**
wairua	7, 56	**spirit**
wai tai	118	**sea water**
wai-ū	110	**milk**
waka	53, 87	**canoe, narrow receptacle**
wakawaka	87	**bed in plantation**
wana	80, 88	**young shoot, well grown**
wānanga	80, 88	**occult arts**
waru	42, 95	**eight**
wawā	121	**make rumbling noise**
wāwahi	123	**divide**
wāwāhi	86	**to break**
wē	135	**water**
wehi	97	**to fear**
wei	135	**water**
wera	11	**hot**
werawera	11, 134	**somewhat hot**
wero	38, 124	**stab, spear**
wī	10	**tussock**
wiri	90	**to tremble**
wīwī	10	**rushes**

WH

whā	6, 15, 16, 17, 41, 100	**four** (passim) **be disclosed** 6
whae	6, 25, 139	**madam**
whaea	25, 111	**aunt, or mother**
whāea	25	**< Plural of preceding >**
whai	6, 35, 49, 100	**perform a spell** 6 **follow** 35, 49, 100
whāiti	112	**small place**

whaiwhai	105	**hunt**
whaka-	17, 19, 53, 90, 109	**make** 17, 19, 53, 90, 109 < **Prefix >**
whaka-maoa (maonga, maoka	90 Index	**make + cook cook)**
whakamarama	110	**crescent top (hoe)**
whakangau	105	**hunt**
whaka-pā	6	**tell privately**
whakāro	129	**think**
whakatautau	111	**wail**
whākau	53	**surround with net**
whakawiriwiri	90	**cruel**
whāki	17	**disclose**
whānau	56, 96	**family**
whanga	Index	**harbour**
whāngai	115	**feed**
whānui	137	**broad**
whara	126	**struck**
wharahi	137	**broad**
whare	28, 31, 32	**house**
whati	126	**broken**
whawha	97	**fight**
whāwhā	17, 132	**take in the hand** 17 **feel** 132
whea ?	136	**where, how many ?**
whengu	138	**snort**
whero	38, 116	**red**
whetū	125	**star**
wheua	83	**bone**
whio	29	**blue duck**
whiro	29, 83	**evil**
whiti	29	**hoop**
whītiki	29	**girdle**
whito	29	**dwarf**
whitu	41, 120	**seven**
whiuwhiu	10	**overlapping layers of toetoe**

NOTE : The words *ngaro* “fly”, p. 99, and *(pē)pepe* “moth”, “butterfly”, p. 111, were added after this index was closed.

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Assistance with the genetics was provided by Fred Knox. His comments summarised the material now presented by Penny & Meyer in Vaka Moana (Howe ed. 2006 : 98 – 99). He also referred me to more technical articles by Geoff Chambers, and to Kirch & Green's book. This recommends an interdisciplinary approach. Any adequate solution to the problem of Maori origins should ideally reconcile the findings of linguistics, genetics and archaeology. There are still many puzzles to be solved. Knowledge remains incomplete. Why do the mitochondrial and male DNA appear to conflict, for example ?

ABOUT THE AUTHOR

Graham Campbell-Dunn was awarded his MA in Classics with First Class Honours by the University of New Zealand and went to Cambridge on a Postgraduate Scholarship, where he studied under the comparativists W. S. Allen and R. G. Coleman. His eminent teachers also included John Chadwick who worked on the Linear B decipherment and the linguist John Lyons, a former student of Noam Chomsky.

After lecturing at the NZ universities Graham retired in 1991 to devote his time to research into the African origins of the classical and related languages. His interest in Italian theories of Mediterranean substrate lead him to study the work of the Niger-Congo comparative scholars D. Westermann and H. Mukarovsky. His researches have cast new light on Minoan Linear A, Etruscan, Basque, Indo-European and now Sumerian. Graham is the founder of Template Theory, a radical new hypothesis concerning syllabic structure and lost sound replacement in early African languages.

MAORI : THE AFRICAN EVIDENCE

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We now have conclusive evidence (basic vocabulary, morphology, sound correspondences) that Maori and the other Malayo-Polynesian languages are African. They are related to the Niger-Congo group.

MAORI	**NIGER-CONGO**
inu **"drink"**	***nu*** **"drink"**
rā **"sun", "day"**	***da, ra*** **"sun", "day"**
uma **"breast"**	***má*** **"mother"**
niho **"tooth"**	***ní*** **"tooth"**
kai **"food", "eat"**	***ká*** **"bite"**
manu **"bird"**	***nu*** **"bird"**
kumi **"ten fathoms"**	***kumi*** **"ten"**
piau **"axe"**	***pia*** **"axe"**
tau **"to count"**	***tá*** **"to count"**

The Maori singular and plural articles match singular and plural prefixes 5 & 6 in Bantu. Indeed most of the Bantu noun prefixes can be identified in Maori. Further investigation revealed a relationship that envelopes the entire grammatical systems of Maori and Niger-Congo. This relationship cannot be due to chance.

FRONT COVER : Tattooed Face of "Tupai Cupa" (Craik "The New Zealanders")